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ABSTRACT

The Public Libraries and Adult Independent Learners (PLAIL) Project was conducted in the United Kingdom, Portugal, and Spain to identify the following: needs of adult independent learners; services required to meet those needs; extent to which those services rely on existing and new technology; and skills and competencies required to provide the services. The major project activities were as follows: research into the library needs of adult independent learners; development and definition of key standards and competency levels relating to the core skills of public libraries serving adult learners; and development, production, and delivery of pilot training materials in a range of media and delivery mechanisms. Among the PLAIL Project's major outputs were the following: clear statement of standards and competency levels for public libraries working within this area of activity; recommendations regarding efficient and effective use of new technology to enable libraries to achieve new standards and levels of service; guidelines on public libraries' training needs in responding to adult independent learners; and dissemination program across the wider European Community. (Appended are the following: PLAIL Project deliverables, CD-based digital interactive multimedia solutions, dissemination activities and exploration strategy, and a 203-item bibliography.) (MN)

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ED 414 465

Public Libraries and Adult Independent Learners

Final Report of the PLAIL Project
1996

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PUBLIC LIBRARIES & ADULT INDEPENDENT LEARNERS

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1. Executive Summary

The *raison d'être* of the PLAIL Project arises from the complex socio-economic and technological changes impacting on all the countries of the European Union, one consequence of which is the growing demand for public libraries to provide information, guidance, materials and physical facilities and equipment to support adult independent learners. To meet this demand efficiently and effectively, the professional expertise and competencies of library personnél must be enhanced and both adult learners and library personnél must be better enabled to exploit new technologies.

The nature and consequences of the socio-economic changes, and the needs of adult learners, the IT developments and their implications both for staff training and service delivery, and the kind of skills and innovative professional development required by librarians are authoritatively delineated by this report.

PLAIL contributes significantly to the objectives of Action Line III in the Library Programme in terms of its innovation in establishing standards focused on service delivery for different sized library service points, in meeting the needs of adult independent learners, in enhancing the ability of librarians to meet those needs, and in both exploiting existing technology and in creating audio-visual and computer-based training products specially designed for staff training in order to achieve these ends.

The ultimate and overall objective of the PLAIL Project was to promote the establishment and improvement of pan-European focused services for adult independent learners through public libraries, with particular reference to the exploitation of replicable new technology products both for staff training and service delivery to adults.

This objective, and the various project 'deliverables' produced by project partners towards its achievement, are perceived to be highly relevant and most timely in relation both to the needs of adult learners and to the development of an innovative rôle for public library personnél in the future.

2. Project Background

P.L.A.I.L. is an acronym for Public Libraries and Adult Independent Learners, a two-year research project which arose from the rapidly increasing customer demand, in terms of number, complexity and range, being experienced by public libraries throughout the U.K. and other EC countries to provide information, guidance and library materials support for independent learners. The project was funded by the E.C.'s Action Plan for Libraries Programme.

2.1 Project Partners

Partners involved in the project were:

Clwyd Library and Information Service [Project Leader]
Scottish Council for Educational Technology, Scotland
Instituto da Biblioteca Nacional e do Livro, Portugal
Universidade Aberta, Portugal
Fundación Municipal de Cultura, Educación y Universidad Popular Ayuntamiento de Gijón, Spain

2.2 Project Management

A Project Management Steering Group consisting of up to two senior representatives from each partner organisation was established, serviced by the Project Management Assistant. Members of this management team were:

Gwyn Williams (Project Director)
Hedd ap Emlyn (Project Management Assistant)
José Fernandez Calixto
Pedro Coelho
Zelia Dias
Richard Faint
Carmen Alvarez Fernandez
José Reis Lagarto
Jorge Fernandez León
Eunice Pinto (part of project)
Ian Smith (part of project)
Alan Watkin

The rôle of the project management team was to direct and monitor the progress of the project; control and monitor the project budget, agree evaluation criteria, standards recommendations and report contents; and plan and determine the dissemination strategy for the project.

In addition, all the members of the Project Management Steering Group were directly involved in work on the individual work packages. Their work was supplemented by individual members of staff of their respective organisations who were assigned specific rôles in relation to individual work packages.

The P.L.A.I.L. project sought to answer the key questions underpinning the project, namely:

- What are the needs of adult independent learners?
- What services are required to meet those needs?
- To what extent do these Services rely on (or could be more effectively delivered through) existing and new technology?
- What are the skills and competencies required to provide these Services?
- How can these skills and competencies be acquired using existing and new technology?

No relevant international standards currently exist in relation to the level of service or the skills and competencies required by public librarians to meet the needs of adult independent learners. However, it is a key intention of the Partners participating in the project to submit their findings and recommendations of the Project to the appropriate professional organisations in the U.K., Portugal and Spain for formal acceptance.

The P.L.A.I.L. project can be summarised into the following broad categories:

> **Research** into the library needs of adult independent learners, analysis of the library services required to meet those needs and the potential applications of new technologies for library training and service delivery.

Definition – the development and precise definition of a series of key standards and competency levels relating to, for example, the core skills of public libraries providing services to adult learners; the development of practical recommendations and guidelines regarding future service delivery, for instance in relation to the utilisation and exploitation of new technology; the development of performance indicators for public library services and adult independent learners.

Development, production and delivery of pilot training materials in a range of media and a variety of delivery mechanisms.

Each of these three key areas was further subdivided into a series of Work Packages, the conclusions and findings of each serving to inform other Packages.

The major outputs of P.L.A.I.L., therefore, include:–

- A clear statement of standards and competency levels for public librarians working within this area of activity.
- Recommendations regarding the efficient and effective use of new technology to enable public librarians and public library services to attain such standards and levels of service.
- Guidelines on the training needs of public librarians in responding to adult independent learners.
- A dissemination programme both within the specific countries involved in this project and across the wider European Community.

It is considered that this project has contributed significantly to the development and provision of innovative library services in response to client needs and demands. It has both encouraged and enabled library services in the U.K., in Portugal and in Spain to explore the application of higher levels of new information and communication technologies in a library

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setting and to examine their potential for both the development of library support for independent learning and the delivery of staff training programmes. As a result, it is hoped that both librarians, and the adult learners with whom they work, have become increasingly comfortable and skilled at using a range of technologies and this will have spin-off effects in many other aspects of their work.

3. Adult Independent Learners: Definition, Identification and Needs

3.1 Definition of Adult Independent Learners

> "The adult independent learner is somebody who is studying on his or her own, often outside the formal education system. Purposive study in this way can often lead to progress into flexible and distance learning projects, or into a more formal course of college-based study.
>
> Emphasis on the learner as an individual is deliberate and important.... Independent learners are individual; they do not fit into any recognised group and are now often seen as a college class of one alone, requiring a standard of service that may well be very extensive and which is certainly very personal."
>
> Anthony Bamber[1]

Adult independent learners are those who

> "...engage in specific learning activities on a regular or an occasional basis – either as individuals or in groups – without formally enrolling for a course with an educational or training agency."
>
> Vernon Smith[2]

A simple and straightforward definition of Open Learning is presented in the Guidance Notes published in the joint report by Clwyd and Gwynedd Libraries on flexible and open learning in North Wales:

> "Open Learning is a means whereby people can gain access to educational courses and materials for study independent of an educational establishment but with tutor support where required. It enables people to choose their own time, place and pace of study."[3]

A further description of 'open' learning says:

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[1] BAMBER, Anthony L., Look Up – and Learn: Library Association adult independent learning guidelines for libraries and learning resource centres. London: Library Association Publishing, 1992. p3

[2] SMITH, Vernon, Public Libraries and Adult Independent Learners (Working Paper 27). London: Council for Educational Technology, 1987

[3] ALDRICH, R. & WATKIN, A, Enhancement of Flexible and Open Learning in North Wales: the Development of Accredited Support for Adult Learners. Clwyd Library & Information Service & Gwynedd Department of Culture & Leisure, 1994. p53

> "It means that the learners (or trainees, or students) have choice. They have freedom to manoeuvre. They have control of the way they learn. There isn't as much control imposed by such people as lecturers, instructors, or teachers as in conventional training and education."
>
> Phil Race[4]

For the purpose of this project, however, the following definition was adopted as a broad description of features which characterise Adult Independent Learners:

> Adult Independent Learners are those who are studying on their own, often outside the formal education system, and who wish to maintain control over their own pace and place of study. This method of study is usually undertaken as a means of overcoming numerous barriers that prevent attendance on more conventional and traditional courses; these may include irregular work patterns, family commitments, distance from educational establishments or inflexible timetables.
>
> Areas of study may extend from basic education skills to managerial skills and may be in the form of flexible, distance or open learning.
>
> Since Adult Independent Learners rarely fit into a recognisable group, attention is always focused on the learner as an individual. Therefore, emphasis is placed on providing a service to individuals based on their specific needs.

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[4] RACE, Phil, The Open Learning Handbook: Promoting Quality in Designing and Delivering Flexible Learning. London: Kogan Page Ltd., 1994. 2nd ed. p23

3.2 Identification of adult independent learners

a) Portugal

Research has revealed that there is no record of surveys or studies having been undertaken which attempt to identify adult learners in Portugal. Nonetheless, circumstances in Portugal during the past twenty years or so have been such that three broad categories of adult learners may be easily identified as those who left the education system prematurely, those affected by social conditions and teachers affected by education reforms.

Portugal's education system has experienced several major reforms during the twenty years after the revolution of 1974, so much so that they had a severely disruptive effect on many students, who became frustrated by the constant changes in their curriculum. Their response was to leave the education system and to return to it, when suitable opportunities arose, as open university students. This high drop-out rate primarily occurred among university students.

Another category are those affected by social conditions e.g. people with family commitments or those facing poverty, thus requiring whole families to seek employment and denying them the opportunity to gain an education. They now take advantage of opportunities to enrol on open university courses.

However, the vast majority of adult students in Portugal are student-teachers. They, too, were adversely affected by constant reforms to the education system, but so, too, were teachers with five or six years' teaching experience who required re-training as a direct result of these reforms. The emphasis, today, therefore, is on the training and re-training of teachers in the latest, and more stable, pedagogical philosophy.

Whilst these are today's adult students in Portugal, they do not constitute truly 'adult independent learners' since they are affiliated to courses directly run by the Open University. However, the establishment of an open and flexible learning service in Portugal would facilitate easier access to training and re-training programmes for these categories of people, and, indeed, for a far wider range of clients.

b) Spain

It appears that no research has been undertaken in Spain which attempts to identify and categorise adult independent learners and consequently there is no printed literature which can be used as a source of reference for the P.L.A.I.L. project. However, the results of discussions with relevant experienced personnél indicate that it is possible to state that adult learners in Spain may be broadly grouped into four categories:

1. People who require basic education skills. In Spain, 20% of the population is over 50 years old many of whom lack basic writing and reading skills. In Gijón alone, over 1,000 people are attending basic education courses provided by the Ministry of Education and some local organisations such as the Universidad Popular, which offers a flexible training system for adults, including multicultural communities.

2. Open University students (over 25 years old): these are returning to education after obtaining few educational qualifications. Entry follows the successful completion of one examination and no other qualifications are required. There are in excess of 100,000 of these students in Spain today.

3. Graduates who are studying for a career and who wish to gain professional qualifications. This category also includes teachers who require training in new skills. Some distance courses are provided, but they are primarily short, summer courses.

4. The past fifteen years have seen a substantial increase in the number of women who are returning to work. They require educational provision ranging from basic level to Open University level. Special training programmes are provided for them, e.g. the E.C. funded NOW programme, which is mainly provided in the form of

temporary projects linked to local and regional governments via the education services and is a valuable source of education which subsequently provides new opportunities for women.

Clearly, there is an obvious need to satisfy the educational requirements of a wide range of clients in the community, needs which are currently served by the Open University and special programmes targeted specifically for special client groups. Whilst some 'learning packs' are commercially available through shops, these do not cater adequately for all groups and thus it could be suggested that the public library system, working in conjunction with all other education providers, could offer a most valuable network of services to a large number of clients throughout the country.

c) UK

The provision of library services to adult independent learners in the UK has developed rapidly since the late 1980s and these services are now considered an integral part of a public library's functions. Much research has been undertaken into various aspects of Open, Distance and Flexible Learning, yet comparatively few attempts have been made to identify Adult Independent Learners. Three such attempts are summarised below.

Adult independent learners are often characterised by their individuality but may be broadly classified into the following categories:

1. People who have difficulty in accessing formal educational establishments owing to distance, inadequate public transport etc.

2. Women returning to work: they may wish to up-date their skills and abilities, or even re-train for new skills and qualifications. Often, they have limited time for studying owing to family commitments.

3. Second Chance category i.e. people ranging from those who require the basic skills relating to literacy and numeracy to those who require more advanced linguistic or literary abilities. Bamber quotes 57,000 enquiries to the BBC helpline operated for two weeks in 1992 within a specific Second Chance initiative. Allied to this group are those for whom English is a second language; and there may be those who left formal education at an early age without fulfilling their educational potential despite having mastered the basic skills.

4. Older people who may lack the confidence to undertake a formal course – they may have few or no qualifications and may also face the psychological barrier of a lack of confidence.

5. Self–employed business people, and those responsible for running a business employing a small number of employees.

6. Retired people.

7. People to whom the advantage of the more formal course needs to be proved, for whom Open Learning material, for example, can be useful as a foretaste to a formal course, and which also provides an opportunity for self–assessment prior to undertaking a formal course.[5]

Two surveys, independent of each other, *Open Learning and Public Libraries*[6] and *Open For Learning annual report: Library Association Monitoring, Annual Report to December 31st 1993*[7], investigating age, sex and employment status etc. of adult independent learners reached very similar conclusions, and presented evidence to support much correlation between the statistics.

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[5] Summarised from Bamber, A.L. op.cit. pp9–11

[6] ALLRED, John & HEEKS, Peggy, Open Learning and Public Libraries: Evaluation of a Training Agency Initiative, May 1990 pp18–19

[7] Open For Learning annual report: Library Association Monitoring, Annual Report to December 31st 1993. Library Association, 1994

The statistics quoted in Column A below are taken from *Open Learning and Public Libraries*, those quoted in column B have been summarised from *Open For Learning annual report*.

Categories of Adult Independent Learners

	A	B
SEX		
Male	53%	56%
Female	47%	44%
AGE RANGE		
Under 16	–	2%
16–24	–	7%
25–39	–	40%
40–59	–	42%
Over 60	–	8%
EMPLOYMENT STATUS		
Employed	54%	62%
Unemployed	29%	33%
Students (FT)	7%	8%
Retired	9%	6%
USE OF MATERIAL		
Employment	32%	25%
General skills training	37%	39%
Leisure purposes	27%	–
Help with business	–	12%
EDUCATIONAL ATTAINMENT		
Basic	21%	11%
O Level	29%	28%
A Level	12%	12%
Diploma	10%	8%
Degree/Professional	34%	40%

The survey shows that whilst 40% of users were aged between 25 and 39, a significant percentage (42%) were aged between 40 and 59 (Column B). Employment figures are also interesting in that 54% (Column A) and 62% (Column B) were employed and 29% (Column A) and 33% (Column B) were unemployed.

It is interesting, and perhaps significant, that according to the Allred and Heeks survey 33% were currently attending some form of formal educational or training, 72% of users had no previous experience of learning on their own with Open Learning material and approximately 33% were not regular library 'borrowers'.

d) Conclusion

It would appear, therefore, that there is no established provision for the independent adult learner in Portugal and Spain but that there is a well-established and popular provision for learners who become affiliated to an educational establishment such as the Open University. However, adult learners would undoubtedly benefit greatly from a more flexible approach to learning and it is envisaged that both Spain and Portugal could follow the pattern of development experienced in the U.K. with regard to the provision of services to adult independent learners which meets their specific requirements on an individual basis rather than on a collective approach.

Research during the project has revealed the lack of documentary evidence which refers to the needs of adult learners in Spain and Portugal whilst much has been undertaken in he UK and it could be suggested that efforts should be made to attempt to redress this situation in order to gain as complete a picture as possible of the situation in both countries. Such surveys would serve to inform, in a constructive and valuable way, the development of services and provision for adult independent learners in Portugal and Spain which would ensure that they best meet their specific and individual needs.

3.3 The Needs of Adult Independent Learners

3.3.1 Methodology

A bibliography of recently published material, limited to the period after 1980, was produced by partners and an analysis made of the bibliographic references in order to identify the needs of adult independent learners. From this analysis, the main issues identified were utilised and adopted as a basis for the design and content of a questionnaire which was then distributed by all three partners to selected libraries and organisations.

Whilst developing the design of the questionnaire, it was assumed that all the choices included in it were relevant to adult independent learners since they had been identified during the analysis of the bibliographical references. It was deemed appropriate, therefore, to seek views on the level of importance attached to each of these choices: very important, important, relevant but not important. In addition, respondents were given opportunities throughout the questionnaire to append any other relevant or new information which had not been identified during the original analysis of the bibliography.

a) Portugal

i) Bibliography

A detailed study of institutions related to teaching and professional training was conducted in order to identify relevant and useful sources of information. Eighteen institutions were identified and subsequently contacted and the following organisations were finally selected to undertake a detailed bibliographic search:

Ministério do Emprego – Serviço de Informação Técnica (SICT)
(Ministry of Employment – Technical Information Service)

Universidade Aberta – Biblioteca
(Open University – Library)

Secretariado Nacional de Reabilitação – Centro Maria Cândida Cunha – Biblioteca
(National Secretariat for Rehabilitation – Maria Cândida Cunha Centre – Library)

Ministério da Educação – Departamento de Educação Básica – Núcleo de Educação Recorrente e Extra-escolar

(Ministry of Education – Department of Basic Education – Recurrent Education and Post-school Section)

Instituto de Formação Bancária
(Institute of Bank Training)

As a result of the contacts with these organisations, 123 bibliographical references were submitted and subsequently analysed.

All the material gathered was recent, published during the 1980s, a period which saw the introduction of new methods of education and training. From this pre-selection of references, 81 were immediately eliminated as they proved to be irrelevant to the project. A further 60 were eliminated because they did not meet the aims of PLAIL. Consequently, only 17 documents were considered to be generally relevant. These were documents relating to flexible and distance learning in Portugal.

Indeed, as a result of the comprehensive research undertaken, it may be concluded that no study or research has been conducted relating specifically to adult independent learners in Portugal and the analysis of the bibliographical references, for the purpose of this project, therefore provided information on the needs of adult learners in general. Nonetheless, these needs are also directly relevant to independent learners and thus the data is deemed valid and sound.

ii) Questionnaire

The questionnaire sought the views of six Portuguese institutions that are directly involved in the provision of an open, flexible or distance education service to adult learners:

Departamento de Educação Básica
(Department of Basic Education)

Instituto do Emprego e Formação Profissional
(Institute of Employment and Professional Training)

Instituto de Formação Bancária
(Institute of Bank Training)

Instituto de Inovação Educacional
(Institute of Educational Innovation)

Universidade Aberta
(Open University)

Universidade Internacional para a Terceira Idade
(International University for the Third Age)

Owing to the low number of returns, the research into the needs of adult independent learners was extended to include expert professionals in the field of Adult Education and Librarianship and the evidence provided by them, and by the original respondents, is considered representative of the current situation of adult learners in Portugal. It may be concluded that there is a distinct lack of tradition of adult independent learning in Portugal, and a consequent shortage of provision of information, and of actual experience in dealing with adult independent learners.

b) Spain

i) Bibliography

There is a general lack of literature in Spain directly related to open learning and adult independent learners. Indeed, no extensive study has ever been published about adult independent learners in Spain, therefore it was decided to widen the search with the purpose of finding other types of materials which would prove useful and relevant.

The investigation was thus directed towards the open university and adult education in general, because the main principles could legitimately be adapted to adult independent learners.

Owing to the lack of reported initiatives and programmes related to this topic, the existing bibliography concerning adult education is exclusively concentrated upon studies relating to specific experience which has been undertaken in a particular city or to reports and statistics compiled by an establishment which incorporates this type of teaching within its programmes.

The information revealed by this wider search makes special reference to distance learning in particular (Instituto Nacional de Bachillerato a Distancia and Universidad Nacional de Educación a Distancia) and the conclusions reached as a direct result of studying all this material can be applied to adult independent learners, thus providing an accurate delineation of their needs.

ii) Questionnaire

Numerous private and public organisations and institutions whose work was considered to be directly or indirectly related to the objectives of the P.L.A.I.L. Project were contacted, such as the Adult Education Centre at Gijón and the Training Institute at Madrid, thus providing several interesting ideas and experiences.

The questionnaire was sent to 27 institutions and a total of ten were returned. The replies proved to be extremely useful and valid in that they had been completed by leading experts and providers in the field of adult and continuing education, whose depth and breadth of knowledge and experience would serve to inform the project in a most valuable way. The ten respondents were:

Centro de Educación de Adultos
(Adult Education Centre) Spanish Ministry for Education and Science, Gijón

Instituto Madrileño para la Formación
(Training Institute of Madrid) Madrid

Fundación Emisora Cultural Canaria
(Cultural Broadcasting Foundation of Canaria) Las Palmas de Gran Canaria

Universidad Autónoma de Barcelona
(Autonomic University of Barcelona) Barcelona
Sección de Educación de Personas Adultas
(Adult Education Department) Generalität Valenciana, Valencia

Centro para la Innovación y Desarrollo de la Educación a Distancia
(Centre for Innovation and Development of Distance Education), Madrid

Servicio de Educación a Adultos
(Adult Education Service) Centro Andaluz de Documentación, Sevilla

Universidad Técnica de Educación de Adultos y Compensatoria
(Technical University of Adult and Complementary Education) Gobierno de Navarra, Pamplona

Dirección General de Promoción Educativa
(General Department of Educational Promotion) Gobierno de Canarias. Las Palmas de Gran Canaria

Servicio de Educación de Adultos
(Adult Education Service) Gobierno Vasco, Vitoria

It was also decided that widening the research could potentially reveal further evidence and, consequently, tutors and students of the "Universidad Popular", department of the Fundación Municipal de Cultura, Educación y Universidad Popular, which directs its main activities to adult education, were contacted and their professional judgement sought.

Thus, the analysis of the problems which adult independent learners experience has been approached from three directions:

Organisations and institutions – nationally

Teachers of the "Universidad Popular de Gijón" – locally

Students of the Universidad Popular de Gijón – locally

Although the geographical remit of each group is different (i.e. it covers both national and local contacts, thus providing a broad and balanced opinion), the data has been interpreted collectively, taking into account that the geographical location does not imply that there would be great differences between the difficulties the adult independent learner may face in various parts of the country.

However, the proportion of questionnaires of each group are balanced:

50% of the questionnaires record the opinions of the institutions and teachers

50% of the questionnaires record the difficulties faced by adults who are actually receiving education.

This provides an accurate and equitable consensus and is judged to be a valid and valuable source of information.

c) U.K.

i) Bibliography

A select bibliography was produced following an extensive search through the following standard bibliographic sources:

Applied Social Science Index & Abstracts 1987–1993
BNB, 1986–1994
Bookbank (Books in Print)
British Education Index 1989–1993
British Newspaper Index
Educational Resources Information Centre (ERIC)
Library & Information Science Abstracts (LISA)
National Educational Resources Information Service (NERIS)

It was decided to restrict entries to those published after 1980 because so many of the significant developments and changes in services to Adult Independent Learners, and in the field of Open Learning in particular, occurred after this date. Even so, some of this earlier material is nearly fifteen years old and cognisance must be taken of the fact that the majority of public library services to adult independent learners were not established and developed until the late 1980s. Consequently, most post 1990 material should be better informed regarding the present level of library services to adult independent learners and the bibliography reflects this through a representation of at least 50% of material which is post 1988 (the period when, for example, Clwyd Library & Information Service conducted a pilot study into the feasibility of establishing Open Learning services in public libraries).

ii) Questionnaire

The questionnaire sought the views of 100 public library authorities and institutions throughout the U.K. directly involved in the provision of an open learning service to adult independent learners.

An encouraging return rate of 55% was achieved and the analysis revealed a distinct pattern of replies relating to the following areas:

- The problems facing prospective adult learners
- Their information requirements
- The types of materials required by adult independent learners
- The facilities required by adult independent learners
- The advice, guidance and counselling requirements of adult independent learners

Indeed, the overall pattern of replies confirmed the analysis of the bibliography, with impressive percentages corroborating its accuracy and validity.

3.3.2 Analysis

1. The barriers which may prevent people from undertaking formal studies linked to an educational establishment

Analysis of the bibliographic records revealed several passing reference to the barriers which may prevent people from undertaking formal studies linked to an educational establishment. Evidence of these barriers were considered relevant during the research since they represent the problems and difficulties faced by numerous adult independent learners and, indeed, reflect their motivation for self-study. Consequently, they could provide a valuable and significant indication of some of the services which should be provided by a public library service in order to meet both the expressed requirements and unidentified needs of adult independent learners.

The analysis of both the bibliography and the questionnaire returns from all three countries revealed five major barriers which prevented adult independent learners from embarking on courses of study which are directly linked to an educational establishment.

a) Physical

The main, and by far the most problematic, physical barrier is that the travelling distance from the learner's home to an educational establishment is too great. This was confirmed by the questionnaire returns where 90% of respondents indicated that this was either an important or very important factor. Linked to this, according to the desk research and the survey, is that the required resources e.g. course materials, access to technology etc. may not be available locally. This is often exacerbated by an inadequate transport service, particularly in rural areas, which in effect prevents access to these resources. Physical disability is also a relevant physical factor for some people - a surprisingly substantial 83% of respondents to the survey considered this to be an important or very important factor. These factors are common to Portugal, Spain and the UK.

b) Educational

Educational barriers to learning are quite significant and may be broadly categorised into course content, course availability and course convenience.

In the UK, a substantial figure of 92% showed that one of the main educational barriers is the lack of suitable courses and this is echoed in both Spain and Portugal. Indeed, this is the predominant feature of educational barriers in Spain according to 85% of respondents. Conversely, however, one problem highlighted by a London public library was that there are too many colleges offering a wide range of courses, thus leading to confusion.

All partners discovered that other relevant problems include (i) existing courses being over-subscribed, (ii) the course content is unsuitable, and (iii) the level of the course is unsuitable. Course dates and duration were often unsuitable or course running times were inconvenient. Of secondary significance in Portugal was the inadequacy of course objectives and difficulties with the speed of learning.

Whilst 75% of U.K. respondents considered course qualifications to be important or very important, a significant 25% indicated that they are not important, thus reflecting a substantial category of adult independent learners for whom obtaining qualifications is not the prime objective. In Spain, 66% indicated that courses led to unsuitable or to no qualifications, but a substantial 34% considered this unimportant. There was no evidence in Portugal for a similar comparison to be made.

Other negative educational factors highlighted in the responses include:

i) No self-assessment facility

ii) Little or no self-control over own learning programme

iii) A lack of flexibility i.e. being unable to attend part of a course or study specific modules

iv) Some courses may have a tendency to transmute into academic courses in order to enhance the credibility of the institution

v) The formal education system is geared to the age range of the individuals rather than to their needs

c) Individual/personal barriers

Inflexible work schedules or shift work patterns were highlighted as the most significant personal barriers in all partner countries, whilst other significant factors, averaging 93% in all countries, included lack of time to attend classes; inability to attend full–time courses; family commitments; and a lack of day release opportunities.

Other barriers identified by the questionnaire include:

i) Lack of support from family to facilitate attendance at formal classes

ii) Lack of awareness of the opportunities available

iii) Too long away from mainstream educational life and its stimulus

iv) Perceptions regarding the value of formal courses in a climate of limited employment opportunities

d) Financial

Financial difficulties appear to be particularly relevant in the U.K. and are arguably the strongest factor in preventing adult independent learners from attending formal courses in both Spain and the U.K. They are usually related to costly course fees and materials, and the cost of travel. This is especially true for the unemployed, for those who have a low disposable income, and those who are not eligible for a grant.

The survey revealed, for example, that in the U.K. 100% indicated that course fees were too costly for many learners, 96% indicated that learners could not afford to travel, 87% stated that materials were too expensive, 89% recorded that most learners were not eligible for a grant, and 73% showed that unemployment was a significant factor. Yet, 27% of respondents indicated that whilst unemployment was relevant, it was not important, which confirms evidence regarding the ratio between employed and unemployed in the two surveys referred to above (see Section 3.2 above).

The situation in Spain is very similar, with 86% and 73% respectively referring to the substantial costs of fees and materials. A lower percentage, but nevertheless no less significant and relevant, referred to the costs of travel and learners' ineligibility for receiving a grant.

Financial barriers do not feature among the problems which are faced by adult learners in Portugal since education, until very recently, has been available free of charge. However, reference was made to the expense of materials and the consequential effect on unemployed people and to the costs of travel.

Other financial factors highlighted by the responses to the questionnaire included:

i) Learners prefer to have the ability to stop a course whenever they wish, and so not waste money

ii) Lack of information/awareness of the availability of financial assistance available

iii) Restrictions relating to attendance at full-time courses whilst receiving social benefits

iv) Many students came from areas of multiple deprivation and were not able to participate in any service which was not free

v) Value for money (especially for experienced adult independent learners)

vi) Other associated costs e.g. examination fees, child care costs etc. were a deterrent

e) Psychological barriers to learning

Perhaps the main psychological factor facing adult independent learners is the fact that their preconceptions about learning and studying is based on their former school days, especially if they had suffered a 'bad' experience at school. In other words, their school experience may dominate their attitude which consequently is reflected in a negative approach to studying later in life. This was identified during desk research and confirmed by all partners: 100% in Portugal, 79% in Spain and 83% from the U.K.; whilst 100%, 69% and 91% respectively indicated that school experience, in whatever form it may take, dominates adult learners' attitude.

Conversely, some students may have forgotten how to study, or may lack the necessary study skills. However, many adult learners suffer from anxiety owing to long absence from study and may even consider themselves too old to study. Indeed, this is identified as a prime psychological barrier by the survey analysis. This leads to a lack of confidence and to an apprehension regarding revealing their inadequacies to their peers or to a younger generation of students.

In Spain, educational problems revolve around the fact that many adult learners abandoned their formal education prematurely and thus they have lost the 'habit' of studying. Many have not achieved an adequate level of education sufficient to pursue specific subjects and do not possess the required study techniques. They frequently experience feelings of isolation which is compounded by a lack of stimulus and consequently, many learners abandon their studies. This is echoed in passing references in the literature of Portugal.

2. The information needs of adult independent learners

All library authorities and institutions involved with providing a service to adult independent learners indicated the great importance of providing information for adult independent learners. In the U.K., the main information requirements include details of the sources of information which are available, the types and availability of courses, the level of study and qualifications offered, their relevance to the job market and the costs involved (relevant to fees and materials) together with details of any funding which may be available for the learner. The time obligation of courses may be relevant as well as information on suitable study materials which are available. Absence of such information is a problem in Spain and the consequential lack of details regarding even the existence of courses is highlighted. Portugal, too, experiences a similar situation regarding a general lack of information regarding adult classes.

3. The materials required by adult independent learners

The materials required by adult independent learners are commonly identified as specially-designed study packs (and in particular, material which is written in an informal style). This was confirmed by 94% of respondents in the survey. Very often, these are computer-based materials, but not exclusively so – the survey indicated that a combination of books and audio and video cassettes are the ideal study materials. This, of course, is dependant upon the nature and requirement of the course. Journals are also relevant, but do not feature as prominently as books in the printed category of material. This may be a reflection on the current availability of journals in public libraries.

In Spain, the needs of adult learners have led to the production of a range of materials which have been specifically designed to suit learners' individual circumstances. They fall into three primary categories: printed materials, audio and visual materials and new technologies.

The need for printed material is aptly summarised by Moragues and V. Saurí:

> An immediate need in distance learning for adults was the preparation of specific teaching materials, based upon the written word, printed texts, individual workbooks, study guides, etc., which would encourage self-study.
>
> Despite the continuous evolution which adult education is going through, it was important to tackle the problem of the production of materials well-adapted to self-study activities and distance learning, especially as one of the peculiar characteristics of this kind of education is the need to be able to depend upon teaching documents which are highly structured and which fill the rôle of the teacher in aiding the independent learning process.
>
> We know that people who follow distance learning courses require materials prepared in such a way that they motivate and make learning into an individualised and personalised experience. Thus, special attention is paid to written material given that it is the main teaching aid in this style of education.
>
> A printed course aimed at distance learning is basically different from a normal textbook. The information provided by a textbook is normally rounded out with the teachers' explanations, while a distance study course must guide and teach with its own explanations, examples for clarification and different types of activity. When preparing and writing such materials it must be borne in mind that their end users

> will depend, fundamentally, upon these materials; and so they must be produced thinking about how efficiently they will produce independent learning processes.[8]

Thus, the Valencian Regional Government, for example, offers study guides, reference books, workbooks and answer books. The printed study material offered by the *Universidad Nacional de Enseñanza a Distancia* is centred around what they call "Study Units"[9], the fundamental basis for independent study which must include all the necessary guidance to permit efficient study These offer all those resources which encourage learning – plans, lesson summaries, aids to the formulation of learning objectives, applied exercises, questions inserted into the text, test exercises, and recommended activities etc..

Also, the presence of printed material in all the self-study centres to whose documentation access was facilitated underlines even more the need for the existence of such material.

The survey indicated that audio-visual material and new technologies (including all audio-visual resources and communication media) are of major importance for adult learners. All the sources consulted agree upon their importance for independent learning, and that they constitute an important and significant alternative to the limitations which this system of education may present, for example in the absence of communication between teacher or tutor and student.

These tools permit an ever wider access to different areas of knowledge. However, it must be remembered that in the case of some of this material, their complexity may produce a certain inequality caused by the difficulties of access for those students lacking some basic knowledge of how to use such media. Therefore whilst the development of information technology has meant a real revolution, one must know how to use it.

Analysis of the survey also revealed that access to these media at all times must be provided for them to be truly effective within the learning process and that it was important to select the most suitable material for each individual person and for each specific subject.

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[8] Revista de Educación a Distancia, (Madrid), 4, (1992), p58

[9] Summarised from DINIZ, Terezinha: Universidad Abierta, educación a distancia: una alternativa de educación superior. Madrid: Universidad Nacional de Educación a Distancia, 1992.

Respondents to the UK survey indicated that the provision of material in languages other than English should be considered, with one source commenting on the dearth of material in the Welsh language. This would be particularly relevant in the rural heartland of North-West and South-West Wales where there is higher proportion of people whose first language, and preferred language of communication, is Welsh. Consideration should also be given to the production and provision of material in languages which are not indigenous to the U.K., such as Urdu and Hindi etc..

Analysis of the survey also identified other specific requirements such as:

i) Materials for the blind or partially sighted
ii) Workbooks & materials for practical courses (e.g. circuit boards)
iii) CD-ROM
iv) Self-assessment sheets

4. The facilities and equipment which should be provided for adult independent learners

The conclusions of the analysis of the survey show that equipment required for adult independent learners in libraries reflect the format of study packages and would typically include access to a PC, a video recorder and a cassette player despite the substantially large percentage of homes which may possess this equipment. Where these facilities are provided, the necessary instruction in their use should also be offered.

Access to photocopying facilities is important, as is a facility for private study, but less so slide viewing facilities. Crèche facilities should ideally be made available for adult independent learners and for library users in general, but few libraries have the accommodation to provide these. However, this was not seen as important in Portugal. Attitudes towards the sale of workbooks in libraries varied greatly - 60% in the U.K. indicated that they are not important; 79% in Spain referred to their importance, whilst there was no general consensus in Portugal.

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The opportunity to meet other adult independent learners to discuss progress or problems with others doing the same or similar course would be beneficial e.g. self-supported study groups, according to the survey. This was seen as especially important in Spain and Portugal, but this was not universally supported in the UK. However, this may not be the case in predominantly rural areas of the U.K. and one reply to the questionnaire referred to the current development of a Flexifax service for adult independent learners which facilitates access by both learners and tutors, for example, to communication via facsimile transmission. Communication could be further enhanced in the near future through the utilisation of video conferencing, the costs of which have become far more realistic in recent years.

In Spain special reference was made to the need for a wide variety of media, namely audio-cassettes, video-cassettes (each with its corresponding player), radio, television, videotext, videodisk, computers, slide projectors, overhead projectors, video cameras and access to a photocopier.

In *Factores de eficacia de los Centros Asociados de la U.N.E.D.*[10], there appears a series of proposals and recommendations on how suitable spaces for the practice of academic activities should be provided, which could be perfectly well applied to the needs of adult independent learners:

- Tutorial rooms
- Study rooms
- Library with lending and reference services

Also, in the article, *¿Cómo ayudar al adulto en su adaptación al trabajo individual?*[11], a series of practical guidelines for the physical and environmental conditions for study in order to achieve improved performance is offered:

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[10] MARTINEZ MEDIANO, Catalina: Factores de eficacia de los centros asociados de la UNED. Madrid: Universidad Nacional de Educación a Distancia, 1993

[11] MARTINEZ PARRA, Enriqueta + PLEGUEZUELOS AGUILAR, Francisca: Como ayudar al adulto en su adaptacion al trabajo intelectual. Boletín Información del INBAD, (Madrid), 3, Sep. 1987.

- Study in a place which facilitates concentration
- Study in an intimate, personal place
- Study in a comfortable place (suitable workdesk and chair, light coming from the left, ventilation etc.)

The public library should be able to provide such facilities and in most cases, this should be considered alongside the fact that it is usually well situated with regard to the population centre where it is located, which will consequently improve its accessibility for adult learners.

Public libraries also provide a very wide variety of resources which the learner may use, ranging from traditional material such as books, magazines and newspapers, to more recent options such as audio and video libraries, for example, and access to the new technologies and communications networks.

Another important factor is the fact that these materials are generally offered free of charge and as such their use is not restricted, i.e., the student can study at his/her own pace, can adapt these resources to his/her own needs, without any limitation other than those imposed by the availability of the materials themselves.

The library's own facilities – whether cultural, leisure, educational or informational – also provide a very wide range of learning resources which should be readily available for adult independent learners. Therefore the library should be considered as an important source of materials and aids, equipment and technology, open to everyone who, for whatever reason, should wish to make use of it, and the librarian should be considered the person whose function it is to ensure the provision of necessary information and support to those who require it.

Latest developments include the introduction of computer–delivered training and interactive video, together with computer access to learning materials. However, no references were discovered in the bibliographic sources available.

5. The advice/guidance/counselling which should be provided for adult independent learners

The analysis of the responses to the questionnaire from all three partner countries revealed that an overwhelming majority of providers agreed that an essential and significant aspect of the service a public library should offer adult independent learners was that of counselling in the form of guidance and advice.

Research in the UK showed that:-

i) The prime requirement for adult independent learners in the U.K. is to help them to interpret information and to assist them to identify and assess their learning needs and goals. Assistance should also be offered to identify the level of study required.

ii) Library staff need to help identify the appropriate subject area, offer guidance to clients in the selection of suitable courses or study material and advise on additional learning resources needs by identifying other library resources which can help the learner.

iii) Advice on study schedules should be offered e.g. by helping the learner identify what pace of study is most suitable, and assistance in devising a learning action plan or strategy that suits the needs of the learner (and which matches the requirements of any organisations involved) should be provided.

iv) Some adult independent learners may require guidance on effective learning skills; monitoring and helping learners during their studies would give them added confidence.

v) Assisting progression by facilitating access to accreditation processes and, where appropriate, to other training or educational opportunities is an important aspect of the counselling which should be offered to adult independent learners and reflects growing emphasis in the world of work and education.

Literature research in Portugal revealed that no documentary evidence seems to exist to identify the counselling requirements of adult independent learners; however, an analysis of the reports in Spain concluded that they all concur regarding the existence of a series of specific functions to aid people in organising their own learning, of which the following may be highlighted:

- Providing information on specific subjects and courses and on the use of audio-visual resources or other learning techniques
- Helping students to evaluate their needs and competencies so that each person may outline his/her own individual learning course
- Locating existing resources, or obtaining new information on subjects identified by means of the needs analysis
- Compiling a series of information resources, means and models related to various subjects and study areas
- Co-operating with students outside the formal context or group as a motivator or interlocutor
- Helping students to develop an attitude and a learning focus which will encourage independence
- Encouraging discussion, the posing of questions and small group activities to stimulate interest in the learning experience
- Contributing to the development of a positive attitude to learning and to self-study
- Progressive reduction in the learner's dependence upon the educator
- Helping students to take a greater responsibility for defining their learning objectives, planning of their own learning programme and evaluating their progress

All this suggests the need for a guidance tutor, or mentor, and the students' adoption of personal responsibility for their own achievement but once again, it may be suggested here that the public library should become involved, with the librarian adopting a 'mentoring' rôle which would fulfil this requirement.

6. The support which should be given to adult independent learners

Research of UK literature indicates that support for adult independent learners should include arranging access to tutorial support or other specialist help, the provision of support material to supplement the learner's course, and assistance with study skills if required. Assisting the learners to monitor and assess their progress can be of very real benefit to the learner.

It also indicates that the provision of assistance in dealing with agencies providing education or training is very important in order to negotiate with institutions or agencies on behalf of individuals or groups for whom there may be additional barriers. This may lead to offering access to accreditation, helping the learner to identify possible options, and identifying whether client wishes to pursue access to accreditation.

Feedback and evaluation of courses, both to the provider and to the user, is invaluable, according to evidence gleaned from desk research. Also important is assisting the learner to assess the outcome of the learning process i.e. does it meet the need, what next etc.

Despite a well-established provision for adult learners in Portugal through the Open University, the results of this project have highlighted the need for research into the support which they require. The importance of the tutor is highlighted by all Spanish students surveyed and who are following distance learning courses and according to a study carried out by the Valencian Regional Government of distance learning for adults [12] this kind of learning presents special difficulties, and as such, teachers/tutors must pay adequate attention to each student. Such teacher-student contact may be possible in various ways: in person, by telephone, by correspondence, through audio-visual media, etc. The project concludes that librarians could be trained to develop their skills in counselling and giving advice etc., in order to fill or bridge the gap between the student and the tutor.

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[12] HERRANZ ABALOS, María Angeles + SAURI PASTOR, Vicente (coord.): La educación a distancia de personas adultas en la Comunidad Valenciana. Valencia: Conselleria de Cultura, Educació i Ciència, 1990

According to the Valencian study, tutorial action as part of distance learning in Spain seeks to:

- motivate and guide each person's self study so that they may make the best use of the process available and apply strategies which will solve the problems of his/her personal learning situation
- offer information about the contents and objectives of the learning process
- provide students with personalised and individual education to solve their specific difficulties
- explain study techniques
- promote group work
- make correct use of the available material[13]

The importance of the tutor is also emphasised in higher distance education. The study undertaken by Catalina Martínez[14] lays down the three basic functions which the tutor should perform towards his/her students:

a) Guidance

b) Teaching

c) Evaluation

Within the guidance and teaching functions, Martinez suggests various objectives should be highlighted which it is believed may prove effective when estimating the needs of adult independent learners:

- Helping the student to clarify his/her goals and to analyse his/her possibilities of achieving those goals
- Guidance with study methods
- Helping the student to adopt an active learning attitude and to develop his/her capacity for independent study

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[13] Summarised from HERRANZ ABALOS, María Angeles + SAURI PASTOR, Vicente (coord.) op. cit.

[14] op. cit.

- Teaching the student to solve problems
- Teaching the student to use bibliographic material
- Helping the students reply by telephone, individually, or in groups[15]

The study reveals that the needs of adult learners and those they themselves emphasise most are, therefore:

- To learn how to study
- To combine study with other commitments
- To maintain motivation and overcoming difficulties throughout the course
- To acquire self-confidence
- To decide upon one's own rate of progress, i.e., allowing the adult the possibility of taking up or leaving off his/her training when he/she thinks it necessary, thus eliminating the concept of the "academic year" as a closed cycle with a fixed timetable and pre-established dates for qualification.

It is also necessary to draw attention to the special importance of evaluating the adult independent learners' achievements. During the project's research, it was discovered that all sources agree that this should be focused on with great caution since experience has shown that any expression of disapproval with regard to adult students tends to discourage them, therefore it is considered that informal evaluation is especially appropriate for adults and that it is an excellent means of ensuring their direct involvement with the learning process and with their own progress.

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[15] op.cit.

3.3.3Conclusions: The Library Response to Needs of Adult Independent Learners

The conclusions of the analysis of the bibliographic material and of the survey conducted in libraries in Portugal, Spain and the UK suggest that the following services should be provided by public libraries as a comprehensive level of service to adult independent learners:

1. Information

It is essential that all library authorities and institutions involved with providing a service to adult independent learners should provide them with information, particularly on what **sources of information** are available, and on the **availability of courses**.

Other significantly important aspects of information which should be provided include the **relevance of courses to the job market**; what **funding** is available; **course fees** and **cost of materials**; **availability of suitable materials for study**; information on the **level of study** within courses and details of any **qualifications**.

2. Appropriate study materials

The survey revealed a predictable preference for **specially-designed study packs** as the most suitable materials for adult independent learners, especially those which are written in an informal style. **Books** are obviously extremely important as well as **computer-based materials, audio and video cassettes**, thus reflecting the importance and value placed upon a multi-media approach to studying.

A more recent development has been the introduction of **interactive video** as a powerful and effective study medium, although the initial capital outlay could prevent some library authorities from being able to purchase this equipment. However, establishing a partnership with an outside agency could be a successful, practical and effective means of overcoming this problem.

Other relevant points highlighted during the research included:

i) Materials for the blind or partially sighted
ii) Workbooks & materials for practical courses
iii) Materials in languages other than the major language of the country
iv) CD-ROM
v) Self-assessment sheets

3. Adequate facilities and equipment

Suitable facilities for studying are a prerequisite in the provision of a quality service to adult independent learners. A basic need is adequate **study space.** **Access to a PC** is required and the research and survey showed a consistent demand for **audio and video playback facilities.**

Slide-viewing facilities are less important but the provision of **access to photocopying facilities** is one of the most important facilities which should be provided. The **sale of workbooks** need not necessarily be a priority although this may become a necessity at a later stage and the provision of **crèche facilities** is considered a luxury few authorities could afford.

The opportunity to meet other independent learners in order to discuss progress or problems e.g. in the form of **self-study groups,** should be made available and efforts should also be made to promote this provision, especially in predominantly rural areas. One reference was made to the current development of a **Flexifax** service for adult independent learners, and the possible future development of **video telephone**[16], both of which facilitate improved communication between learner and tutor.

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[16] This is now superceded by video conferencing facilities.

4. Counselling: advice and guidance

Counselling, in the form of **guidance and advice**, was identified by most respondents as an essential and significant aspect of the service a public library should offer adult independent learners and the analysis of the bibliography and the questionnaire revealed the importance placed by most providers on this aspect of the service.

However, the survey revealed that counselling is an area of provision which is not provided in a consistent manner and consideration should be given to implementing agreed and consistent standards and levels of provision by the profession in general.

Helping adult independent learners to **interpret information** and to assist them to **identify and assess their learning needs and goals** is one essential aspect of counselling. Assistance should also be offered to **identify the level of study** required.

Library staff should also **identify appropriate subject areas** and offer guidance to clients in the **selection of appropriate courses or study material**. Advice on **additional learning resources needs** by **identifying other library resources** which can help the learner will ensure that the learner makes the best possible use of the library's resources.

Advice on **study schedules** should be offered e.g. by identifying what pace of study is most suitable and assistance in devising a **learning action plan** or strategy that suits the needs of the learner and which matches the requirements of any organisations involved should be provided.

Many adult independent learners may require guidance on effective **learning skills** whilst monitoring and assisting learners during their studies to give them added confidence could prove a great benefit to adult independent learners.

The survey revealed that **assisting progression by facilitating access to accreditation processes** and, where appropriate, to other training or educational opportunities is an important aspect of the counselling which should be offered to adult independent learners.

5. Support

Giving support to adult independent learners during their studies is equally important. This support should be in the form of **instruction in the use of PCs and other technology** relevant to the needs of adult independent learners; **support material to accompany courses**; **study skills support**; arranging **access to tutorial support**; **feedback and evaluation of courses**; providing **help with dealing with agencies which provide education or training**.

Despite the cautious attitude revealed in the response from the U.K. towards **monitoring the progress** of adult independent learners it should, however, be seriously considered by library authorities which are eager to provide a full and valuable service to adult independent learners. Attitudes towards **assessment of progress** echoed this caution, but nevertheless, there are indications that this is an increasingly important aspect of the service and it is one which is recognised by Spain and Portugal.

Both the research and survey identified lack of confidence among adult independent learners and consequently providing **encouragement, reassurance and positive support** in order to instil confidence is one of the most valuable aspects of a personalised approach to a professional service for adult independent learners.

Indeed, much emphasis is placed on directing support towards developing the independence of adult learners and it is the considered view of the project partners that public libraries are the ideal source for both meeting the needs of adult independent learners and developing and maintaining their independence.

4. The rôle of IT in staff training in support of Adult Independent Learners in UK, Spain and Portugal

4.1 Introduction

It could be argued that changes in employment, work patterns and educational and training provision, which are all heavily driven by technological changes, will bring about the need for libraries to re-orientate themselves to meet the needs of adult learners. These changes will be manifested by greater flexibility in work arrangements and training, a wider range of educational resources, including "multimedia", being used as a delivery mechanism. Also, communications will increasingly be used as an enabling technology to both enhance learning for those in regular educational institutions as well as a key part of offering distributed, distance learning and support to learners in informal educational settings. As technology develops and the increasing power and flexibility of computers provides more interactive and involving learning packages, then librarians will face increasing demands for supporting learners.

This will obviously give rise to questions concerning where does a librarian's rôle stop and a tutor's begin? Or what technical assistance should be available from public libraries and librarians? How expert do librarians become in matters of technology and in supporting clients on the myriad learning packages that will be emanating on CD formats over the next few years? What are the skills that have to be developed to support learners who wish to utilise these resources? Where, when and how are they supported?

Whilst the PLAIL Project can't be expected to provide answers to all these questions, some of the findings of research and the experience of the development process at least provide some pointers for the future in this regard.

The methodology of the research into the use of IT by libraries both as means of supporting adult learners and also in respect of their own utilisation for training etc. was firstly desk researched by the project partners on general use of IT in libraries and in the wider European context. The desk research was followed by a detailed questionnaire, administered to a representative sample of the three countries' libraries and authorities, and some face-to-face interviews with librarians to validate the findings (see section 4.3 below). These findings were used to form conclusions and recommendations which are contained within the PLAIL report *The Use of IT in Staff Training and in Support of Adults Independent Learners in Portugal, Spain and the UK*[17]. As part of the training and development process involved in creating the materials, the librarians involved, in Spain, Portugal and the UK, also contributed information and commentary through the recording of experiences, both formal and informal, after training workshops and exposure to the training material.

One of the thrusts of the research was to ascertain how present investment in IT could be maximised to provide enhanced staff training and thus increased levels of competence in supporting AILs (Adult Independent Learners). It was found that there are five overlapping areas where IT is used in libraries: automated cataloguing and lending systems, administration and housekeeping, reference and information work, staff training, and client use.

Libraries still regarded automated cataloguing and lending systems to be the preserve of the technical specialists, though increasing use of IT in referencing and administration does appear to have a limited effect on improving staff competence. Staff whose professional training had included an IT component were more confident in dealing with IT problems or extrapolating their skills into new areas i.e. supporting learners. Few libraries appear to have been able to offer enhanced services (or at least, as much as they would like) to AILs, although many surveyed by the project in all three countries plan to do so in the future.

4.2 Context

The following section contains a synopsis of the context in which each partner country operates, relevant to the use of IT in libraries and highlights developments concerning adult independent learners and technologies. For a fuller picture of developments concerning IT and libraries in member states, see the PLAIL report *The Use of IT in Staff Training and in Support of Adults Independent Learners in Portugal, Spain and the UK* (op. cit.).

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[17] The Use of IT in Staff Training and in Support of Adults Independent Learners in Portugal, Spain and the UK. Clwyd County Council, Mold, Clwyd, Wales on behalf of the PLAIL Project, November 1994. ISBN: 1 85991 008 4

In the UK, the greatest evidence of new technology in public libraries was in computerised catalogues which are now installed in 80% of public library authorities. However, it appears that 77% of public libraries have integrated library systems, handling stock, membership and circulation control, 60% of public libraries now provide on-line searches of commercial databases, while 30% of authorities also provide on-line public access catalogues (OPACs).

Library management systems are the general 'housekeeping' systems which are used by libraries to undertake specialist functions such as stock and budgetary control and management. Public libraries now tend towards the use of turnkey systems where a single manufacturer supplies and maintains all aspects of required hardware and software. Such systems are typically based on a (library controlled) minicomputer servicing a wide area communications network via dedicated BT lines, and the DS Ltd Galaxy system used in Clwyd is an exemplar.

Application of IT to library management includes stock control systems ('the catalogue') and membership control systems (which maintain records for all users). Circulation control systems link stock and membership. These systems are integrated and maintained on-line with real-time updating across the whole network, such that any change in one area is reflected immediately in the other two. Also, acquisition control systems allow requirements for new stock items to be registered with the library computer.

In terms of the development of hardware systems in public libraries the greatest influence is likely to be a move towards open architecture platforms. Hitherto, purchasers of turnkey systems have been constrained to accepting only hardware supplied by the system developer. The migration of the latest systems into 'open' operating systems such as UNIX means that in future libraries will have a much wider choice of hardware on which to base their systems and networks.

An ever-increasing volume of reference information is being issued in CD-ROM format. The experience of academic libraries raises the conjecture that, except for time sensitive data, on-line database usage will increasingly be replaced by the use of in-house CD-ROM databases, possibly networked, although, increased use of the Internet may influence this development. As with the development of OPACs (On-line Public Access systems) this is likely to give rise to a greater degree of physical interaction between library users and the public library system, since the nature of such software encourages direct access by users.

All library authorities may access the British Library system and electronically log requests through its ARTel system. This activity is as likely to be carried out via a stand-alone PC system equipped with modem and communications software as it is to be integrated with the full library management system.

IT has a strong role to play in the direct delivery of information to end users. Most public library services also produce or supply databases of local community information. As with interlending systems, database access is as likely to be through dedicated PCs as it is to be accessed through the library network.

A renewed emphasis on the empowerment of library users in exercising personal responsibility and control in their use of public library services is encouraging the implementation of On-line Public ACcess systems (OPACs). Already widely adopted in higher education library systems, OPACs free users from the need for the mediation of library staff in their interactions with the library management system. Working through intelligent PC-based terminals equipped with modern graphical user interfaces, users can not only interrogate library stock catalogues but also, with appropriate safeguards, examine their own records and accounts (with the added possibility of undertaking actual financial transactions), place reservations on items, and issue and return their own books. Continued development of OPACs will undoubtedly have far-reaching effects on the attitudes of the public to the delivery of library services and on the future rôles of public library staff.

Spain

In Spain during the period of the survey, despite not being one of the most developed countries regarding new technologies, computerisation has already been used in libraries for some years and most of the academic and research libraries are involved in this process. However, this is not the picture in specialised or public libraries. The most popular applications of technology are in cataloguing and OPACs. Other applications such as purchasing, lending, etc. have a much lower level of application.

The increase of educational documentary audio-visual production for home purposes and the intention on the part of libraries to offer new technologies, has made the introduction of non-librarian support in Spanish public libraries more commonplace.

According to current information given by the Library Co-ordination Centre, out of the 51 main libraries in Spain, 30 have an audio library and 30 have a videotheque (video lending facility).

According to details provided by the Library Co-ordination Centre, since 1987, 32 libraries have been computerised, 25 of them have adopted software and the other seven are using DOBIS/LIBIS, although they may change to ABSYS.

In Spanish libraries, CD-ROM is considered as the ideal way for the distribution of catalogues and bibliographies to libraries located far away from the issuing centre. It is replacing microfilm because, in addition to its low maintenance, CD-ROM provides immediate search facilities. The majority of computers purchased are PC compatible machines, although applications for Apple Macintosh are gaining ground.

Spanish companies specialising in documentation (such as DOC6 or Micronet) or major bookshops (such a LUA or Paradox) have signed formal distribution contracts with the different publishing agents. Some of them publish periodically a complete catalogue of available CD-ROMs, which currently totals in excess of 700 titles. Most of these are in English but an increasing number of titles are either being translated into Spanish or are originated in Spanish. They also offer other services such as technical backup, software update management, access to international databases, etc. The products published on CD-ROM are primarily databases (archives of bibliography, legislation, documentation, etc.). Telecommunications and the establishment of communications between computers, or networks of computers, has been highly limited by the deficiencies of the telephone network. However much effort , in the form of investment and technology, has been put into correcting these faults.

The Spanish Telephone Company, Telefónica Española, provides the infrastructure for the videotext service of the IBERTEXT network. This public service permits access to the databases and other transnational services of the respective Serving Centres, accessed via Commuted Telephone Network (RTC) and the IBERPAC public data transmission network.

Recently, a tendency has been observed for communications to be established in an interactive way (with the capacity to maintain two-way communications) and in multimedia (integrated voice, sound, data, text, static and moving images). In 1994, the company Telefónica Española introduced the first RDSI (Digital Integrated Service Network) in order to allow the simultaneous transmission of data, voice and images as well a connections between computers. Initially it seems that these services will principally affect the information and entertainment sectors, although they also offer substantial opportunities in other fields such as health and education.

Telefónica Española has also created its own system (INFOVIA, No 055) which allows access to serving centres which have requested this service. For this purpose, users are offered the required software free of charge, with connection costs charged at local rates regardless of distance. Such facilities provide significant advantages to Internet users.

The Spanish Ministry of Culture established the PIC (Cultural Information Points) programme some years ago, installing information terminals with access to various databases in numerous public centres, such as libraries or information or cultural centres. Their most notable function is as a reference centre, through a catalogue of services, including the National Library, ISBN, surveys of cultural centres, a Collective Catalogue of Periodical Publications, a survey of publisher, press articles, etc.

In conclusion, the establishment of new information technologies in Spanish libraries is taking gradually taking place. For the time being, it seems that the users of Spanish libraries can only take benefit of a quicker access to information thanks to the computerised catalogues by means of the OPAC. Although record libraries and "videotheques" are being incorporated into libraries, they are not given an adequate educational focus. CD-ROM is still not widely available to users of Spanish libraries, and so far only specific professional staff in libraries are entitled to use it, primarily for the recovering of bibliographic information.

Portugal

The existing technology in the public libraries of the Public Library Network available for users mainly includes audio and VHS system video. The IT hardware most commonly used is IBM compatible PCs , with UNIX based Multi-user and Multi-tasking system but it is not widely utilised, although by the end of 1994 nine libraries were fully automated. Software, for technical and information management includes, for the UNIX system, GEAC Advance, and for IBM compatible PCs, the most currently used is Mini-micro CDS/ISIS. A range of word-processing and spreadsheet packages are used.

CD-ROM is planned for future use in major public libraries. IBL, the national library institute, have two sets available for staff and public as a free-service. The National Library participated in an EC project in order to produce a bibliographic database with the national current bibliography of Italy, Portugal, Denmark and the Netherlands. From a technological aspect, it was considered an innovative project as it used for the first time the UNIMARC format in more than one country simultaneously.

The curriculum of librarians' post-graduate courses includes training in documentation technology and in automation, aiming at preparing librarians to use computers, mainly in a

DOS system environment, and to build bibliographic databases which provide software for file transfer and X 400 electronic mail.

4.3 Methodology

The method employed of gaining information primarily involved questionnaire and desk research on the general use of technologies in learning and training as well as research on IT in libraries specifically.

The same basic questionnaire was used in all three countries, with partners determining modifications required to elicit the necessary information, selecting a cross-section of their public libraries (small, medium and large) and translating the form and interpreting and analysing the evidence on their completion and return, according to common principles.

The essence of the questionnaire was to request information on :

- the size of the library (staff, issues, population served)
- the technology used (cataloguing and other uses)
- staff training undertaken (what technologies were used)
- audio visual areas utilised
- technology and support available for AILs
- future plans in this area

Questions were asked about the technology available for cataloguing, reference and client use, in order to gain an overall picture of the IT resource and investment and what staff are using.

Questions were also asked about the AV resources and areas in order to gain information regarding their capability for handling and displaying non-book materials for users.

Staff training is an important element, and information was required regarding the usual methods of delivery.

Finally, questions relating to technology and support for AILs were asked in order to find out what libraries currently provided, and what their future plans were.

The numbers of questionnaires dispatched were:

UK - 167, with 102 returns
Spain - 70, with 32 returns
Portugal - 61, with 44 returns

The UK findings indicated that IT is extensively used in libraries, primarily for cataloguing and then administration and reference, less so in staff training, and with a small but increasing provision for clients. Frequently, this was through the involvement of an Open Learning facility, established by external "pump-priming" funding. There was a high degree of concurrence that libraries should provide an enhanced service to AILs, but this depended on resources and staff time, and that a much higher level of training for staff to offer this staff was required. This would be primarily technical to provide IT support. Currently, when structured training was on offer it was predominantly print-based, and technology was under-used as a media for staff training.

The Spanish findings indicated that there was a much lower level of use of IT in libraries, with 25% having no IT provision. Only 25% lend CBT (Computer Based Training) material, and have technology of any kind (OPAC, CD-ROM etc.) available for client use. However, 72% responded that the librarian should have an active role in supporting AILs to utilise new technologies, however they would require training in new technology.

In Portugal, there has been a low level of IT investment, owing to the comparatively recent arrival of the public library network. Currently, 50% of public libraries have no computer technology at all. However, there is now a major commitment to establish an IT infrastructure among selected libraries, which will grow with the national development of the public library network.

All three countries do identify the support of learners as closely linked to the provision of enhanced technological facilities. Disparity appears when planned training and development is required in order to implement this.

Some replies to the research questionnaire indicated that there is still compartmentalism i.e. that technology is for librarians, and that open learning (i.e. adult independent learning) is a distinct and a separate service from librarians' main role. However, this was a minority view. Although integrated services were more advanced in the UK, compared with Spain and Portugal, there were stated plans to invest in these areas in these two countries when budgets allowed.

Most of the computers available to staff are 386 and 486 PCs, with a reasonable number of libraries either with CD-ROM, or at least plans to obtain one. Some older 286 machines have been relegated to administration, reference and specialised database use, or passed on to client use. Windows is the common operating system. In some authorities 386 PCs were used as public OPACs terminals.

Numerous libraries indicated that their future developments included installing systems other than PC based ones i.e. Amiga, but generally the direction for future investment is predominantly PC based with CD ROM, and occasionally MPC. This is common across the three countries. A significant minority stated that they would be purchasing PCs that conformed to the MPC standard. As CD ROM will be increasingly important for reference as well as lending materials, it is a suitable technology on which to issue staff training materials, as it will help build the bridge for librarians to become familiar with the technology. Also, costs of CD production have decreased; it is capable of storing large amounts of data and material, and therefore is cheap to distribute.

4.4 Information Technology and Staff Training

Changes in information and communication technologies are also increasing the potential for independent learning by librarians. Increased storage capacity, faster transmission rates, more intuitive interfaces and sophisticated applications at decreasing prices provide great potential for both library staff and end users.

Librarians have limited experience in using these technologies, and although sophisticated technology is increasingly used for cataloguing etc., it does not appear that IT skills acquired are intended to "spill over" into client support, or even for staff training.

The advent of powerful but inexpensive PCs with CD ROM has given most libraries the facility to offer adult learners an extensive reference and educational facility. Many libraries are purchasing PCs (almost exclusively, there was little evidence of other systems being purchased) with the capability for staff training as well as client use. There was little evidence that IT investment was considered to be multi-functional in this way, though physical limitations of location etc. may influence these decisions. On a wider scale, it could be considered that to maximise investment made in automated systems with the installation of networks and on-line systems, consideration should be given to the use of these for staff training, as more material and information becomes available from a central source (i.e. a server) or a variety of points (i.e. the Internet).

Many of the PC systems which libraries are installing have the functionality of acting as "dumb terminals" on the network, or as stand alone machines for administration, reference or client use. Libraries should address the issue of maximising investment in IT, through multiple usage, though it is recognised that the first job of a terminal is to access the lending system. However, if librarians are to act as enablers for people to obtain material in the best way possible, and assuming that resources are limited, then the duplication of IT investment in the purchase and running of two systems – one for public use and one for librarians' use, will soon be inappropriate.

The evidence and experience gained from the PLAIL project shows that there is an increasing awareness on behalf of librarians of the importance of interconnectivity of computers and the recent phenomenal resurgence of interest in on-line computing e.g. in the Internet, will lead to more libraries taking on the rôle of information centres.

However, the responses indicated once more that this is not uniform, and many libraries are struggling to come to terms with off-line resources such as CD-ROMs etc. and equipping themselves for the increasing amount of material that is now being produced and issued in digital format. The future may well be that much material and resources etc. are available on-line and will be "downloadable" rather than provided on disc. Currently, some public librarians view this potential future distribution medium as a potential problem in that it begs the question of access charges, storage and control, as well as the rôle of the librarian in the process.

There is a need to recognise the range of work that libraries across the three partner countries (and probably EU-wide) embrace when dealing with AILs. This includes the crucial area where general learner support interfaces with the use of technology and supporting AILs. Whilst acknowledging that there is a spectrum of librarian activity, from providing information through to mentoring and then to tutoring, most librarians acknowledge that their rôle should at least extend to supporting adult learners beyond the basic level of providing information. However, when librarians are acting as supporters of learners who are utilising a technology type of programme (e.g. a word processing course, or accessing information via the Internet for research) then they are drawn into areas of analysis of problems, and recommending techniques etc., which are beyond basic trouble shooting advice. Research from the PLAIL project indicates that many libraries are struggling to cope with this rôle, and that new training methods and strategies are required to both implement an extended rôle, and also to ensure skills and attitudes are consistent.

Most libraries had not considered developing standards for the level of service that they might provide AILs, generally or through technology. Most had no stated entitlement statement or recognised policy on the supply and maintenance of hardware or software.

Many were reliant on supporting agencies (i.e. local authority IT departments) in the specification of the equipment, the supply and installation of the basic software, and on-going technical support. Continued development of the technology and purchase of training packages were often dependent on viring funds from other budget heads, participating in collaborative local or EU projects or acquiring funds from other sources such as economic development agencies.

Whilst there is a need for advice and support from other agencies, particularly from departments which are part of the same organisation or body, it is still evident that the embedding of skills and experience in dealing with technology is not taking place sufficiently rapidly, at least in terms of the transition of the library to that of a technological centre offering wide access to the community and where the investment in the technology benefits learners as well as borrowers.

Most libraries had not considered the issues of staff training to recognised standards, such as, for example, those established in the UK by the TDLB (Training and Development Lead Body) which include units on the support of open learners. Although this point refers to the UK, where there are established standards, the picture is common across the three partner countries, i.e. a need to identify common standards for the support of learners, and determine how they can be met, and the implication of training needs. The research evidence and material development process indicated that the issues facing librarians and their needs are much the same across the three partner countries, so the development of a standard approach, and training, where applicable, would be appropriate.

For many libraries, solutions to resolve the training gap may take the form of a developmental, staged process. This will entail changing attitudes towards technology and support rôles, and the major obstacle (apart from time and resources) is to enable public librarians to create the vision and long term strategy in order that training plans which move forward in an effective and coherent fashion can be implemented.

4.5 A Development Programme for Public Librarians

Whilst it is difficult to recommend a programme which would be appropriate across national boundaries, certain lessons can be learned from the PLAIL project. These incorporate two key elements: firstly, that librarians should at some level be consulted and participate in the development and delivery of training materials, and secondly, that technology should be utilised in a phased basis.

Programmes of staff training should be initiated within local collaborative groups, rather than by sole institutions and national and international networking could result in cross-fertilisation of ideas, provide the stimulus for further development, and contribute to the avoidance of duplication and wasted effort.

It is also necessary to utilise the technology available, even though, as evidenced in parts of Spain and Portugal, the technology may only be in the form of basic audio and video. However, the use of open learning packages, and the development of resources, develop awareness and skills, and resources can subsequently be adapted into more advanced multimedia programs. Indeed, using technology itself develops awareness and generic IT skills and utilising the 'open learning approach' develops awareness of how adults learn and of what is required to maintain motivation.

As CD ROM becomes more common, then this platform could be used to introduce training programmes as the second stage. This would have the dual benefit of bringing technology into libraries and provide staff with experience in using them as "dual purpose" technologies.

The conversion of the AV and print resources into multimedia type materials would parallel the usage of the AV resources. The second phase of the programme would result in the issue of material on CD-ROM. A training programme for trainers (i.e. development staff), who would cascade these skills to the practitioners in their own locality, should also be organised concurrently with the second phase. The third phase would involve the conversion of the CD into full multimedia. By this time, it is anticipated that there will be a larger base of MPC machines, more generic titles, as well as staff support as a result of the training programme described above.

Staff training in communications and the usage of WWW and Internet for training should also run concurrently with stages 2 and 3 as this would undoubtedly impact on training delivery.

This dual approach of developing A/V training materials first, together with a multimedia development programme to be released later, would be both practical and would bring about the desired aims of delivering content and skills, whilst enabling librarians to experience the technology.

The PLAIL Project's approach to developing training materials involved the establishment of a small team of staff who possessed skills ranging from experience in supporting adult independent learners to expertise in Multimedia and CD-ROM technologies; it also benefited from the suggestions of non-experienced staff who would be required to participate in the subsequent testing of the materials.

The Project's experience indicates that the technology and processes involved in co-developing the materials, either as part of the development team in an advisory capacity or as part of the training teams, shows that exposure to the technology, and consultation on the specification and content of training materials, give rise to a high degree of ownership and acceptance of the material. Although this can take longer and be more complex and time consuming to arrange than simply preparing a one-off training session, it is undoubtedly more effective and more long-lasting in its benefits. The reports from the training workshops, and the informal reports from the training materials development group, indicated a much increased level of awareness of motivation and understanding.

Whilst recognising that it is impossible for every librarian to be involved in such a consultative exercise in devising and in arranging their own learning programmes, the lessons should be that a) materials are not sacrosanct and can be changed and versioned to suit local needs; b) that small groups could tackle small areas of content; c) that groups should interchange materials.

4.6 Conclusions

From the evidence of the work undertaken by the project, it is clear that there is a need for direction and guidance, as well as the development of skills, in the use of technology, particularly in the area of supporting adult learners.

It was noticeable that in all three partner countries that much staff training is currently print based, or through presentations, and/or video. Open learning was used as a means of delivery, but not extensively.

Across the three partner countries there were definite statements of intent to improve or enhance services for AILs via technology in some respect, though few of the libraries surveyed mentioned a coherent staff development policy, and no mention was made of a policy concerning the introduction and support for technology for either staff or client use.

It is envisaged that there will be an increased blurring of technological boundaries, between cataloguing, administration, housekeeping, reference and information work, as IT becomes less the preserve of the technocrats, and more the realm of the everyday user. With the advent of OPACs and the public becoming used to search facilities, there is a need to support clients who wish to utilise this facility. As more and more packages and reference materials are issued on media other than print, there will be a corresponding need to identify the key issues for staff training and an awareness of the needs of the learners and the future potential, as well as the demands of the technology. New technologies may increase access and opportunity, but they have to be managed and promoted.

Technology is not yet so inexpensive that the cost can be discounted, though with the rising cost of books there may come a point when a CD package will be the cheaper option, as often is the case for reference material. Computers have the advantage of being flexible, in that they can support generic skill development (word processing, DTP etc.) as well as deliver and support training packages.

Survey returns indicated that libraries have no policy or framework on which to specify and purchase technology or software. Although software will become an increasingly important element of materials in packages, facilities for stock selection, previewing and work space will have to be addressed.

Most library authorities recognise that there is a change in emphasis, if not a change in rôle, in the support of AILs. Libraries are anxious to support AILs and to introduce technology but they are unsure as to how and what this entails. The most popular statement centred around the need for more training specifically on acclimatisation to software and technology, and in people and mentoring skills. One other issue raised was in relation to awareness of the level and appropriateness of the resource materials (software, OL packs etc.). There is a real issue here in terms of selection and appropriate level of support, which may involve content skills and detailed knowledge of specific packages.

With limited budgets, it will be important to consider dual functionality when investing in new systems and networks rather than discrete machines for each aspect of library use in that hardware could be used for staff training. Many libraries already use PCs as terminals, and the advent of ISDN and networks capable of carrying large amounts of data at speed will soon make a distributed training environment as viable as a data network is currently. This would involve a scenario where a central server holds materials and records which can be accessed across the library authority network.

When purchasing software, both generic (word processing etc.) as well as subject specific packages, provision should be made for upgrades, security, copyright issues, support materials etc., as well as staff training. It is important that the system is user-friendly and that support packages are available.

All respondents in the UK, Spain and Portugal indicated that they considered that they should support AILs, that technology would be implemented (when budgets allowed) and that there would be a need for training staff in its use and the various other support rôles.

There is a need to establish an overview or infrastructure to provide means of disseminating best practice in the support of AILs, in systems and training requirements, and the technology to make a service effective. This may be EU-wide, or between several partner countries. The aim would be to avoid duplication of effort, and to assist libraries in developing strategies, approaches etc. and to provide information in respect of funding sources to achieve the aims and recommendations above.

Overall, it would appear that there is a need for a coherent plan and policy on which to base future action to support AILs and in staff training. This is a common theme from the findings of surveys in the three partner countries. This could be achieved through a concerted, planned EU-wide programme of trainer training in order to reach all relevant library staff.

Technology is becoming an increasing part of library users' life, in the home or at work or school, for entertainment and for educational uses. Increasing sophistication by users in terms of technology will be reflected in the levels of support they will expect from library staff - including the provision of advice on available software and packages. Staff training in the mid 90's and beyond must take recognition of these wider changes, and must include the planning and preparation of training provision which will treat staff as "adult independent learners" and enable staff to progress beyond the basics and become proficient at technical and support elements of IT-based training programmes.

4.7 Summary

- There is a need for libraries to develop a coherent plan and standards for library services regarding the support of adult learners

- There is a need for systematic training for all library staff on IT generally, and in specific areas for those involved in the provision of services to AILs

- There is a need for an infrastructure or overview to prevent duplication of effort across the EU.

- Libraries should establish links with other providers and funders to establish a prominent rôle in the educational infrastructure of the country

- Libraries should be aware of developments in education and training generally, in order to advise and refer AILs.

- Libraries should examine their AV resource area, and investjgate the scope for integration into a "learners support" area.

- Classification of multimedia resources will become more difficult and should be examined in light of increased number of learning packages that bridge the gap between entertainment and education.

- Libraries should consider future hardware purchases as multi-functional in order to maximum use

- Purchases should adhere to a standard and be upgradeable

- When planning their technology provision, library services should consider the following recommendations:-

    1. Avoid expensive dedicated solutions for standard library administration functions.

    2. Ensure new networks have bandwidth to sustain the on-line delivery of interactive multimedia.

3. Do not purchase 'dumb terminals' but emulate a terminal using a PC.

4. Ensure new PCs purchased subscribe to the MPC standard.

5. Standardise on Windows 3.1 or (3.11 for Workgroups) as an operating environment on PCs used by clients.

6. Purchase other makes of computer as required, for example Apple Macintosh, as the issue of cross-platform compatibility is becoming less of a problem.

5. The Skills and Competencies Required by Librarians to Support Adult Independent Learners

5.1 Introduction

This section of the report corresponds to work undertaken to define the skills and competencies required by librarians to provide services to adult independent learners.

This work was based upon an analysis of the conclusions of the first two reports of the P.L.A.I.L. project, namely *The Needs of Adult Independent Learners*, and *The Use of I.T. in Staff Training and in Support of Adult Independent Learner*[18]. This analysis was then tested and refined through discussions at seminars which were arranged by each of the partner countries participating in the project.

The analysis, supplemented by further desk research, led to the formulation of a list of the skills and competencies required by librarians to support adult independent learners. These skills and competencies, listed in Section 5, are divided into two categories:

i) A broad description of the general skills required (in bold type)

ii) Detailed skills in response to the specific requirements highlighted by the two reports.

5.2 The Public Library's Response

Following the research undertaken earlier in the project, it is apparent that the public library is in an ideal position to serve the needs of adult independent learners, especially in view of the numerous and very real barriers which prevent many adult learners from embarking on courses of study and which have been identified by the Project. To meet the needs of adult independent learners effectively and adequately, libraries need to have appropriately-trained staff, together with suitable buildings, equipment and other resources, notably information technology.

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[18] see Appendix 1

5.3 The Skills & Competencies Required by Librarians to Support Adult Independent Learners

The following is a listing of the key skills and competencies which are required in order that public libraries, through their key resource of staff, are able to meet the perceived needs of Adult Independent Learners. Based on the findings of the research, the skills and competencies required by librarians to provide a full service to Adult Independent Learners can be categorised as follows:-

1. Counselling: advice and guidance
2. Information
3. Appropriate study materials
4. Facilities and equipment
5. Support
6. Marketing

1. Counselling: advice and guidance

General Skills

Have an understanding of the scope and structure of adult education, both vocational and non-vocational, formal and informal;

Possess an understanding of adult independent learners;

Discover, clarify, assess and understand learners' learning needs and the options available to them;

Provide advice and guidance to learners on a continuous basis

Ability/Knowledge Requirements	**Key Skills**
Have an understanding of the scope of adult education, both vocational and non-vocational, formal and informal	Have an awareness of adult education provision nationally and locally; Possess a knowledge of current trends and developments in adult education;
Acquire an understanding of adult independent learners	Have an understanding of the motivations and expectations of adult learners; Have an awareness of how adults learn;
Identify level of study required	Discover and clarify the actual level of study required; Provide information to enable learners to estimate the personal time, resources and commitment they will have to invest in achieving objectives;
Identify appropriate subject areas	Discover the learners' subject interest;
Interpret information	Provide accurate, impartial and appropriate assistance to enable learners to identify their requirements; Assist learners to interpret information and identify and provide most appropriate option; Relate information to the needs of the learner; Be aware of need for referral, provide adequate assistance to obtain support from other centres; Maintain relevant and confidential records;

Ability/Knowledge Requirements	Key Skills
Select appropriate courses/study materials	Identify and provide appropriate study material which is suited to the learners' needs and which meets established learning criteria and objectives; Assist learners in the use of catalogues, bibliographies and other library facilities; Provide information on cost, time, access, support and assessment etc.; Provide book-lists etc. where appropriate;
Development of study schedule/Learning action plan	Identify learners' previous learning experiences and needs; Provide accurate and relevant advice and information which describes the nature, relevance and consequences of different learning strategies; Specify the programme content in relation to the skills required to achieve the agreed outcomes; Identify relevant learning opportunities; Identify and agree realistic outcomes; Ensure that schedule is consistent with learner's needs and goals; Ensure that schedule is compatible with learner's available commitment;
Assist learner to progress through accreditation processes	Provide post-course advice: information on suitable centres; information on qualifications offered; information on any entry requirements; information on courses available; Act as point of referral between learner and institution;

2. Information

General Skills

Demonstrate a knowledge of information sources and the ability to access them;

Possess a knowledge of services for learners in special groups e.g. the handicapped, the housebound etc.;

Accurately identify the type of information required through an analysis of the details provided;

Utilise suitable sources of material, both printed and computerised;

Maintain adequate and relevant records

Information Requirements	Key Skills
Sources of information	Provide details of appropriate sources of information; Access the information, either in printed sources or on databases; Enable learner to develop his/her own search skills; Provide accurate and adequate alternative sources of information e.g. through a networking service;
Information on course data	Provide details of course availability; Provide details of the requirements of courses and what they offer; Provide details of the levels of study; Provide details of the qualifications or accreditation offered by the course; Provide details of course fees and costs of materials required by course;
Information on funding	Provide access to information on the funding sources available;
Information on the availability of suitable materials for study	Exploit the library stock and awareness of availability of inter-lending facilities etc.;

Information Requirements	Key Skills
Relevance of courses to job market	Be aware of current employment market and assist and advise learner as necessary; Identify local needs re. training needs of local employers and employees and active commitment of SMEs;
Services for learners in special groups e.g. the handicapped, the housebound etc.;	Be aware of sources of information relating to the particular needs of learners with disabilities and special needs;

3. Appropriate study materials

General Skills

Specify the materials required to support the learner – based on learning preferences and learning objectives of the learner;

Manage the resources of an open learning scheme;

Have an understanding of copyright regulations;

Provide materials and facilities relevant to learning objectives;

Ensure that the level of materials selected is suited to the learner;

Ability/Knowledge Requirements	Key Skills
Additional resources needs	Identify any other learning resources which may be required or which may be suitable; Provide access to other learning resources;
Specially–designed study packs	Select most appropriate study material; Advise on content and suitability;
Books	Select appropriate printed material from the library's stock; Exploit stock through the selection of other appropriate material;
Computer–based materials	Identify and provide appropriate materials; Use the relevant technology with confidence; Advise learners on the use of the materials and equipment;
Audio & video cassettes	Identify and provide suitable titles; Provide adequate instruction on their use;
Workbooks	Provide the appropriate workbooks to accompany selected courses; Provide appropriate selection of workbooks for sale; Provide guidance and advice relating to any specific requirements therein;

Ability/Knowledge Requirements	Key Skills
Self-assessment sheets	Provide the appropriate material to accompany selected courses;
Journals	Identify and provide appropriate journal titles and articles;
Support material to accompany course	Identify any other library material, in various formats, which may be suitable for the learner; Provide advice to learner on additional material available;
Advice on copyright regulations	Maintain an awareness of current legal developments;
Manage the resources of an open learning scheme	Maintain a selection of bibliographical sources; Select and purchase library material including books, audio-visual, computer-based open learning materials; Classify and arrange collection in a suitable manner; Edit collection to maintain currency; Respond to learners' needs for specific material;

4. Facilities and equipment

General Skills

Identify facilities and equipment needed;

Provide or arrange access;

Provide instruction in use of equipment and support as required;

Ability/Knowledge Requirements	Key Skills
Study space	Ensure that appropriate and practical facilities and study space is provided
Possess background information on information technology	Understand technical infrastructure of library; Demonstrate understanding of the relative strengths and weaknesses and potential of each technology in learning situations; Set up equipment, make linkages and appropriate connections between peripherals and computers; Save programs and manage disk space and other storage media; Be cognisant of various standards for video and audio on computer; Be aware of licensing agreements; Protect against viruses; Create and find material for external sources via network or other links;
Assist the learner in the application of IT	Provide information on the facilities available within the library or externally; Provide assistance and support for learners through understanding of needs; Select appropriate technology to the needs of the learner and which matches the needs of the learning media; Utilise the technology in an appropriate method for learners; Select and load appropriate software applications for learner; Provide continuing assistance and trouble-shooting service;

Ability/Knowledge Requirements	Key Skills
Personal Computer (PC)	Provide assistance and training on operating systems - DOS and Windows;
CD-ROM	Be familiar with interfaces with PC; Know about different sets of device; Be familiar with loading applications for learner to launch;
Multimedia PC (MPC)	Have a knowledge of hardware and software extension, compatibility and standards; Establish and maintain the equipment and linkages to speakers, peripherals etc.;
Compact Disc Interactive (CD-i)	Provide instructions on operating equipment and be familiar with its facilities and applications;
Interactive Video	Set up equipment and launch applications; Provide instruction on operation;
Peripherals (printer, scanner etc.)	Make connections to various peripherals from PC and load software devices; Provide 'trouble-shooting' service;
Software applications	Be proficient in three basic functions (Word Processing, Spreadsheets, Data Bases) and level of skill in integrated package (WORKS); Have knowledge of range of applications learner may use e.g. Desk Top Publishing, graphics; Have awareness of loading and running range of other software and packages that learners may use e.g. Computer Based Training material;
Communication devices	Be able to establish communication links on internal and external networks via e-mail, modem and other devices; Be able to access and transfer data from remote databases; Be aware of protocols and standardisation transfer of digital material;

Ability/Knowledge Requirements	Key Skills
Playback facilities e.g. video & cassette recorder, CD player; Photocopier	Provide information on facilities available and provide instruction on operating equipment;
Flexifax	Provide access to facsimile transmission service;
Video telephone	Provide access to video telephone service (where available);
Self-study groups	Provide information on the facilities available; facilitate the establishment of study groups;

5. Support

General Skills

Provide support to the learner during his/her studies;

Provide additional support if the learner experiences difficulties with study programme;

Ensure support is in response to identified needs;

Ensure response is valid and relevant;

Identify the need for referral to an external agency;

Utilise networking skills via links with other agencies;

Mentoring Support	Key Skills
Study skills support	Identify learners' previous learning experiences and needs; Identify and select options for meeting training and development requirements; Provide relevant advice to learner on approaches to effective learning which is consistent with his/her needs
Access to tutorial support	Help learner identify need for tutorial support; Maintain a list of tutors; Identify suitable tutor support and arrange contact; Identify appropriate educational institution for tutorial support;
Feedback & evaluation of courses	Obtain and use feedback information to assist learner's progress; Obtain and use feedback information as a guide for the evaluation of courses; Provide feedback to support and motivate learner;

Mentoring Support	Key Skills
Monitoring & assessment of progress	Identify and select realistic processes for monitoring and reviewing achievement; Assist learner in monitoring and assessing effectiveness of the learning process; Provide information and advice to support learners in managing their own learning; Evaluate achievement of outcomes against objectives; Recognise any shortfall or accelerated progress in the performance of the learner; Implement any remedial action that may be necessary; Revise work schedule as required; Change the selection of materials in response to learner's circumstances during study; Assess performance against agreed criteria; Apply performance methods in a consistent manner; Maintain suitable, relevant and confidential records consistent with any institutional requirements;
Encouragement, reassurance & positive support	Maintain a positive attitude towards learner and provide encouragement, reassurance & positive support; Provide mentoring support through listening, overcoming isolation, and identification of potential problems/challenges; Encourage learner to solve own problems as part of the learning experience;
Utilise networking skills via links with other agencies	Participate in a multi-skilled team; Maintain a network of contacts e.g. educational providers, advice agencies and employment and training organisations;

6. Marketing

General Skills

Promote services to adult independent learners through a marketing strategy;

Maintain regular contact with the media to raise the profile of the service;

Establish and maintain links with internal and external organisations related to services to adult independent learners;

Marketing requirements	Key Skills
Promote services to adult independent learners through a marketing strategy	Market the service so that potential clients can identify the library as a resource; Arrange a regular programme of promotional events to raise awareness of the service; Target specific promotional activities at specific client groups; Promote services to adult independent learners' to new members of the library; Employ suitable methods to inform the public of the service; Encourage verbal transmission of information to library customers and other identified clients; Adopt targeted 'mailshot' type promotional methods; Identify local clubs and societies which could be the source of potential adult independent learners and target publicity accordingly;
Maintain regular contact with the media to raise the profile of the service	Establish a good working relationship with members of the press and the media;
Establish and maintain links with internal and external organisations related to services to adult independent learners	Establish and maintain links with the local community, educational and professional bodies; advice agencies and employment and training organisations

6. Training Pack Development

6.1 Introduction

One of the most significant aspects of the PLAIL Project was the development, production and delivery of a pilot training pack in a range of media. This chapter describes the development and production of the pilot training package and provides an assessment and evaluation of its effectiveness by a selection of working librarians in the partner countries.

Aims of the Training Pack

- To introduce the PLAIL CBT/Multimedia package to librarians involved in supporting adult independent learners.
- To raise level of awareness and enhance skills in providing a service to Adult Independent Learners.

Objectives of the Training Pack

- To acquaint librarians with the appropriate technology
- To provide librarians with the necessary skills to install and run the training package within their own institutions
- To enable librarians to assist other librarians in accessing and using the package
- To become conversant with the issues concerning the support of adult independent learners in public libraries
- To enhance and develop interviewing, mentoring and action planning skills
- To be able to access relevant parts of the CBT package to enhance services i.e. access database, resources, current issues etc.
- To use the training package to complete a learner's action plan, from initial introduction to interview, to matching with a suitable resource and ongoing support

The pilot training pack which was developed, comprising a video, CD-ROM and supporting user guide, offered a complete training programme for libraries and trainers who are involved in the provision of comprehensive open learning services in public libraries, or who wish to implement or develop such services. The video and CD-ROM provided the flexibility to run a program either for individual librarians or small groups over a flexible period of time. There was an additional objective of increasing awareness about technology and the use of technology in learning through the process of using the multimedia CD.

6.2 Description of Training Pack

a) Video

The video introduces the background affecting education and training in the context of the economy of Europe. This includes changes affecting traditional industries which result in the need for a more flexible and technologically developed workforce. Libraries, whilst maintaining their traditional rôle of serving community and leisure needs, are ideally placed to support learners who wish to update their skills, without enrolling in a formal full or part-time course. The video also demonstrates how librarians may identify learners' needs by utilising case studies of actual learners, who provide first-hand experience of the benefits they had obtained from open learning services at public libraries. This case study approach had the advantage of allowing users to select one of three options and listen to the responses. The subsequent evaluation of this methodology proved to be invaluable and highlights the problem of presenting a real life interview accurately.

b) CD-ROM Multimedia Training Program

The CD-ROM, entitled *The Learning Curve*, is a PC-based multimedia training program, utilising sound, video and graphics to convey messages and training points on the importance of supporting learners and on methods of support. It was also designed to provide the specific skills required to support adult independent learners by guiding the librarian through the action plan cycle. The CD-ROM contains three modules:

- Background to Open Learning
- Identifying Learners' Needs
- Action Planning

Users of the program, either individually or in groups, can work through each module or simply select an appropriate section. Case studies and an interactive example provide ample opportunity for actual practice as well as debate.

Added functionality of the CD-ROM, provided by its large memory capacity, was also utilised. This allowed the inclusion of an open learning resources database as well as a current educational and training trends database. Again, these were derived from the development processes, and the needs of librarians, and were designed to serve the purpose of completing the action plan cycle, namely resourcing the learner with the appropriate study pack. It was envisaged that the eventual final version could contain a fully-fledged database of local open learning resources as well as a locally-maintained database of national and local training opportunities.

6.3 Specification and Design of Training Pack

The development process of the materials involved close collaboration between the two partners immediately involved in the production of the training pack and between these partners and the content specialists.

The model for CD and video was broadly similar. The specification and broad design for the materials were originally defined by development groups in Wales and Portugal and these were subsequently further refined by the technical partners. The CD-ROM, initially produced in an English language version, was scripted and tested by librarians in Wales; development of the Portuguese video involved a partnership effort, with script, translations etc. being exchanged between Universidade Aberta and SCET.

Detailed planning schedules were devised for two scripting workshops, one in Wales and one in Portugal. The workshop in Wales consisted of a group of librarians whose range of skills encompassed experience in the application of multimedia and CD-ROM, writing skills, and experience in supporting adult independent learners. This group participated in a training workshop in CBT production. The workshop in Portugal consisted of professional librarians from Portugal and Spain, who received instruction concerning the skills involved in video scripting. The two groups subsequently produced a working script which culminated in the production of the CD-ROM and video programmes.

The training workshops were specifically designed to accommodate adequate 'hands-on' experience together with an opportunity for feedback. Direct collaboration between SCET and Universidade Aberta resulted in a format which would allow flexibility but which also contained an element of standardisation. A standard evaluation instrument was devised to record the trainees' responses and comments as part of the evaluation process.

It was decided that each workshop would be attended by three librarians who had indicated on a questionnaire that they had varying degrees of experience of supporting adult learners and of utilising technology-based training, and multi-media PCs in particular. In addition, librarians were selected from small, medium and large size libraries, thus reflecting the diversity of library provision in each partner country.

Owing to time constraints and enhanced specification of the CD-ROM, translated versions of the materials were not available for the pilot workshop, therefore the workshops had to utilise the English version CD-ROM and Portuguese video. It transpired that this did not create major difficulties and the librarians accepted that it was a pilot version. It was fortunate that in the case of Portugal and Spain, language skills were sufficiently developed to understand the main themes and training points. Some of the subtleties of the material would have been lost but the translation process subsequently devised for the CD-ROM ensured a relatively speedy and error-free transfer to different language versions.

ii Technical aspects

Technical aspects were primarily concerned with the development of the various language versions. The CD-ROM involved the creation of a replica template version of the CD software (utilising ToolBook) in which translated text could be inserted. This enabled the translation to be completed accurately and quickly through the exchange of disks. The programmer could subsequently 'cut and paste' translated text into the fully working interactive version rather than re-keying the whole text. Audio files were re-recorded by the Spanish partners and despatched on DAT, and video clips were re-recorded in Spanish and Portuguese.

A package similar to Adobe Premiere was used to overdub the video clips in digital domain (AVi files) which avoided the problem of reverting to the original masters. However, it proved to be a time-consuming process since it involved one line at a time, with sound effects queued on top. Partners in Portugal and Spain arranged the successful recording and translating of text directly onto the CD template.

Dubbing work on the video also proved to be time-consuming, (although less technically extensive and problematic), because of the cultural nuances of three languages and the need to change graphics on screen and undertake editing work in order to co-ordinate the pace of the voice-over. Likewise, the multimedia CD-ROM was very labour intensive owing to the planning, development, construction and testing process. Such work included the sourcing and compilation of video, audio and graphics etc., to form an attractive learning environment for the user. Technical aspects regarding utilising the program on various platforms also needed to be addressed.

6.4 Evaluation of Pilot Training Pack

a) Methodology

A second workshop was arranged in Portugal and Wales, the specific aim of which was to provide instruction and guidance in the use of the pilot materials. This was combined with an evaluation of the package. The workshop therefore, had a twofold purpose - that of commencing the training process as well as engendering feedback on the effectiveness of the package.

Following the workshop, the evaluators were given four weeks to utilise and learn from the training package. A detailed questionnaire was devised for the librarians who were the subjects of the research. It must be remembered that although the sample group was small, it represented the range of librarian skills and previous experience which was typical of librarians currently supporting adult independent learners and who were using technology in small, medium and large libraries in Spain, Portugal and the UK.

The questionnaire set out to ascertain the users' level of previous experience in using technology in training, as well as their skills/experience in supporting adult learners. It is important to note that this information was their own interpretation of their skills and experience and consequently it was not scientific. However, the key to testing the package was to ascertain their pre-knowledge since any improvements and evaluation could only be based on: a) what they themselves stated they had learned, b) whether those who rated themselves as beginners in technical matters fared as well or learned as much as the others.

Another point for consideration was whether differences emerged between the UK and Spanish/Portuguese libraries. For example, whether the content was perceived as appropriate and delivered appropriately for all three nationalities. This would have an impact on devising future training programmes across the European Union. Some of the eight librarians who responded (three from Portugal, two from Spain and three from the UK) reported that they possessed medium to advanced level of knowledge and skill. This is represented in the following table:

Previous experience:	None	Low	Medium	Advanced
Using computers		P	P P S UK	S
Using video	P S	UK UK UK	P S	P
Using minimum technology	P UK	P S UK	P S UK	
Reference skills			P P P S	S UK UK UK
Supporting learners		S UK	P P UK	P S UK
Counselling, guidance		S UK	P P P UK	S UK
Open learning and resources	P S	P P UK	S UK	UK

Each letter represents a respondent from a specific partner country:

S = Spain P = Portugal UK = United Kingdom

The higher level of awareness (or self evaluation) could have led to a problem in that some librarians were already highly skilled or sensitised to the issues and, therefore, not suitable subjects to test such a pack. However, this did not prove detrimental to the evaluation process; rather, to the contrary, since the more experienced librarians could comment effectively and with authority, from their own experience, on the quality of the training pack. They also possessed the skills and confidence to implement and continue with the training programme at their library base.

b) Video

The evaluation process involved an assessment of the effectiveness of the video in:-

i) conveying background information
ii) defining adult independent learners
iii) providing information on the needs of adult independent learners
iv) defining open learning.

All responses to the above were uniformly positive and prompted comments such as "It clearly defines what is an adult independent learner and what is intended by open and flexible learning" and "Very clear and easy to understand". One comment indicated that it was "less good at how to provide support". Training points were assimilated by viewing the video. One UK respondent commented that although her level of awareness and motivation had increased, the relevant and positive images were marred by two scenes involving users of an open learning service, in that it contradicted the CD-ROM 'good practice' interview and dubbing detracted from the enjoyment of the video. It was suggested that perhaps sub-titles could be used more effectively.

In general, the video was complimented upon providing background information for increasing awareness of the needs of the adult independent learners, and how libraries should meet their needs.

Consideration was also given to whether the final product had fulfilled the original objective of assisting public librarians in the identification and support of adult independent learners. The librarians' comments on the video were generally very positive and they agreed that the prime objective had been achieved.

It was agreed that the introduction to the subject presented on the video needed to be at an introductory level so that it was appropriate to the diverse experience of the three partner countries.

It would appear that the use of the video provided a good entry point to training and that it led satisfactorily into the multimedia package for a more detailed examination of specific skills.

c) CD-ROM

Owing to the labour intensive nature of CD-ROM production, it had not been possible to produce translated versions from the original English copy for the initial training workshop in Portugal. Nevertheless, it could be easily understood and navigated by all participants through the manipulation of easily identifiable icons. Some technical problems were initially encountered with sound, but the text on screen provided sufficient information and guidance through the modules.

The evaluation questionnaire sought librarians' views concerning the effectiveness of the CD-ROM in conveying background information on adult independent learners, open learning and how open and flexible learning services can be accessed from libraries. The responses were unanimously favourable, with all stating that it was very effective. Although one participant commented that "It's interesting though less effective in this regard than the video as it does not allow users to visualise the process in the same way", this was the only negative point and emphasises the fact that video and multimedia each have their specific advantages and disadvantages. Multimedia can appear disjointed, but its distinct advantage is that it is an interactive learning experience.

The evaluation team identified specific training points which emerged from the CD:

- how to systematise questions for interview
- use of resources
- how to make an action plan
- the importance of mentoring
- techniques to support adult independent learners
- how to organise a dedicated service to the users

All respondents indicated a high level of awareness and motivation after exposure to the program.

Good aspects included:

- concept organisation
- variety of stimuli and activities
- video clips
- simulation exercise
- clarity and structure
- interactivity
- graphics
- practical examples

Some suggestions were offered regarding what could be improved:

- simulation exercise
- examples of good questions
- the facililty which allowed too many windows to be opened

Other positive comments referred to the fact that the video and CD-ROM complement each other but that they could also function as single, stand-alone training tools.

The responses from the librarians involved in piloting the CD-ROM indicated that it is a very flexible training tool and can be used either by individuals or by small groups. It is suitable for use as a stimulus or as a training source, for short sessions or for more concentrated periods, and it was considered suitable for both beginners and more experienced librarians.

Points to note from the above are that:

a) although useful as a stimulus package, most librarians considered it to be a training source;

b) Portuguese librarians thought it better for individuals rather than groups;

c) there was no clear distinction about whether it should be used for long or short sessions;

d) most considered it best suited for beginners rather than experienced librarians;

e) most considered that it would take four or more hours to use the package.

Most general comments were positive concerning the impact of the package in terms of becoming more comfortable with technology-based training when dealing with learners.

Specific comments on the ease of use and screen presentation of the CD-ROM were made by the librarians. The CD-ROM was very easy to install and the on-screen instructions were clear. The ability to switch the sound on/off when starting was considered to be a good feature. The layout of the opening screen was good and kept to a common layout throughout, making the CD-ROM easier to use. Librarians liked the facility to be able to concentrate on 'stand-alone' units. They considered it very flexible to use, with any section being easily accessible according to the user's particular need or interest – it could be 'picked up and put down' as and when required.

The use of icons and text for each button function reduced confusion, but it was considered that the Quick Tour moved through each section rather quickly – a pause between each section would have been preferred.

The CD-ROM provided a good introduction with good commentary. It was easy to use, users were in control regardless of their experience of IT.

The evaluation analysis also revealed that the Main Menu screen was easy to use, the buttons being large and clearly labelled. Using 'pop-up' menus reduced the amount of clutter on the screen and allowed users to focus on specific areas of interest.

The main menu was not too detailed, but was broken down into obvious headings which were sub-divided further. It was considered to be well structured, and it led the user from the general to the specific.

Changing the mouse pointer to a hand or similar icon when passing over 'hot spots' or active areas was recommended in order to reduce confusion about which areas were 'live'.

The case studies of independent learners were discussed in great detail and produced favourable comments. These demonstrated two different kinds of interview and provided appropriate approaches to adult independent learners' 'problems', including:

- how to define their needs

- how to let them talk freely about their requirements
- how to prepare an action plan in order to meet their needs
- how to counsel and guide them through the action plan
- how to conclude an interview satisfactorily.

Examples of bad practice were also shown in order to stimulate discussion.

The use of video clips to enhance the information was effective, and the case study sections were particularly useful. These were presented in a particularly interesting format. The CD-ROM contained a good glossary of computer, education and adult independent learners terminology.

Some librarians considered the section on interviewing skills to be stilted and artificial, but others considered this to be well structured, with the practical simulation complementing the theoretical aspects of the program. One comment stated:

> "When we do something every day, it becomes second nature and there is a tendency for complacency. It is important to be reminded of good practice."

Other functions of the program were commented upon:

> "Database of resources a great idea" and "Current trends would be of great value".

In general, it was felt that these functions would greatly enhance the utility of the package.

All the participants felt that they needed more time to experiment with the CD-ROM as it contained much information and its facilities allowed users to navigate the program in many different ways.

One very important facility the CD-ROM provided was the opportunity to create a database of local opportunities offered in the community, not only the courses available in open distance education but also details of sources for the required resource materials. This would be a very valuable tool for local librarians in order to create local sources of information for adult independent learners.

The evaluation of the use of the CBT multimedia package concluded that:

a) specific sections would be useful either as an awareness raising tool or as a stimulus and discussion tool, although they had previous experience of action planning;

b) the functionality of a resource database would be useful in their rôle although the current issues database would be less so owing to the problem of updating, etc.;

c) some of the responses and interactions on the screen could be enhanced. More realistic case studies could be incorporated which appealed to their more advanced stage of development.

Some negative and detailed feedback included:

a) Certain points of the programme led to a 'blind alley';

b) The program should provide some feedback, i.e. preferred responses, ideas of a score (7 out of 10);

c) Menu system on icon by heading would be preferred;

d) A 'spectrum' on which to clarify the interview scenes, i.e. tends towards 'directive', tends towards 'open' would be useful.

The following are some general recommendations which resulted from the feedback:

a) The navigational issue of the need to enable to move from the beginning of the sequence to the middle and the end more quickly;

b) To re-shoot specific sections to create more realistic responses from the 'actor';

c) To expand the case studies and show the action plan through progressive stages;

d) Demonstrate that librarians do possess the necessary qualifications and skills although they may not be aware of it.

Some specific comments received may be highlighted as follows:

i) A "resource based" approach to learning, i.e. a CD-ROM training pack for example, provides librarians with the attraction of:

  a) using media that is available
  b) studying when they have time
  c) 'seeing, hearing and doing' rather than merely listening
  d) more control and ownership of the process.

ii) The CBT package can be used by individuals and groups and is designed to provide librarians with both background information on open and adult learning, as well as the skills and tools required to monitor and support adult learners.

iii) Using the package as a group can also help to raise and to explain issues concerning adult learning in public libraries.

iv) The package was designed to support 2 local databases, one of resource materials and one of general issues concerning education and training opportunities. Such a facility was considered to be most useful to enable librarians to advise and allocate appropriate resources to learners, based on up-to-date knowledge of issues and trends, and to identify what is available locally. The package would then also be capable of printing the learner's action plan.

6.5 Conclusions

It would appear that the pilot video and CD-ROM did achieve their stated objectives. A key observation from the evaluation is that there was no major difference between the partners in the way the materials were received, used, and learned from nor in the benefits they gained. The differences in response would appear to result from the participants' level of previous knowledge and understanding of supporting adult independent learners.

The secondary aim of increasing librarian's awareness and use of multimedia technology also appears to have been successful and as such would therefore enhance the service offered to adult independent learners. The key points from the evaluation are:

1. The pilot video appears to be an effective awareness-raising and issues-generating device, although there was some 'customer resistance' in the UK to using a dubbed version. Some negative views were expressed regarding the 'actor' participating in the interviews (real-life librarians and customers were used), but it was agreed that these could be combined with print material to provide suitable training sessions. If the print material was structured correctly, the video could be successfully used either as a group or individual training package for libraries without multimedia technology.

2. The multimedia CD-ROM could be used as background information and as an awareness raising tool although it was not as suitable as the video for this purpose. It could be used by individuals or by small groups, and it would appear that two or three short sessions would be most beneficial. Using the technology also increases librarians' awareness of their own learning processes and in indentifying their own strengths and weaknesses concerning technology-based training.

3. The multimedia package also increased awareness of the interview process and the diverse nature of adult independent learners who use libraries. Other useful functions included structuring the interview by appropriate planning, and dealing with difficult situations through the use of questions.

4. The enhanced facility of the databases to include resources and trends in educational and training opportunities was perceived by the three partner countries to be a very useful function, particularly since it could be developed to include local material. It would also enhance the ownership of the product amongst the libraries using the package.

5. It would appear that Spanish and Portuguese librarians were highly impressed by the CD-ROM, more so than the UK librarians, although this may be because the UK librarians had previous esperience of using this medium.

6. With some minor amendments, and the supporting text booklet, it would appear from the evaluation that such a combined package would be a very powerful and flexible training tool for libraries, not only in the UK, Spain and Portugal but throughout the European Union.

A selection of comments made by the evaluation team summarises the enthusiastic reception given to the training pack and are representative of their positive and constructive evaluative remarks:

> "A very informative CD with a great deal of multimedia information."

> "We would use this type of CD-ROM as a constant updating and review disk, perhaps during lunch breaks or short training sessions. Short, 20-minute sessions, would seem most suitable, especially for the first module, entitled *Background Information,* where there is quite a lot of text which has to be read/listened to carefully and digested."

> "Easily lends itself to be used in pairs, thus stimulating discussion and more interaction. The video clips naturally lend themselves to discussion."
>
> "Impressed by the presentation and the content."
>
> "It could be used as an effective open learning training package."
>
> "It has helped me think about reference resources and their better exploitation to meet the needs of adult independent learners."
> "One felt that the multimedia element raised some questions about user support when using the package, but the content was well delivered."
>
> "A distinct quality improvement in supporting adult learners through the mentioned techniques and acquired knowledge."
>
> "Now more comfortable using the mouse! Listening skills have improved."
>
> "My background knowledge has been improved."
>
> "The package will be very important for public libraries in Portugal and for open learning."

And one comment in conclusion:

> "Little did I think when we first met as a group that we would contribute to such a polished product".

7. Levels of Provision of Services to Adult Independent Learners and Related Performance Indicators

The levels of service presented here, and the performance indicators related to them, are the first such performance indicators for services to adult independent learners in that no relevant national nor international standards exist in relation to levels of services to this category of library customers. They are based on an analysis of the PLAIL Project's first two reports.

The importance of producing and utilising performance indicators is reflected in today's customer-led and customer-conscious public services. The value of evaluating and measuring services in order to meet specific standards of performance and services, therefore, should not be underestimated as they provide invaluable information and feedback on the success, or otherwise, of the services provided. This is also an effective way of ensuring that services meet needs and that compliance with stated objectives of the service is maintained. Indeed, perhaps the over-riding principle of performance indicators is that they are designed to assist library managers to make the most effective and efficient use of usually limited resources, to enable library managers to know what they are actually doing, and to best meet the changing and challenging needs of customers.

The greater the depth of service, the greater the level of commitment required. The need for an adequate and effective system of recording, monitoring, assessing and evaluating the services provided by the library is therefore essential. The need for customer feedback to the services provided in order to ensure that the services continually respond to the actual as well as to the perceived needs of target groups and customers is equally important.

Each library authority should aim at formulating targets for its own services to adult independent learners and establishing its own system of recording and monitoring so that the results and responses may be analysed and evaluated based on previously established parameters.

The levels described in this report refer to three categories of service:

1. Level 1 – Point of Contact

   Libraries in this category provide the minimum service to adult independent learners but are important in providing access to a wider network of services – they may be viewed as the gateway to more advanced services.

2. Level 2 – Point of Service

   Libraries in this category provide more than the basic level of service, probably benefiting from a professional librarian able to provide a degree of advice and guidance, but without the full complement of services.

3. Level 3 – Full Study Centre Service

   Libraries in this category should aim to provide a comprehensive and professional service to adult independent learners, including the full range of information provision, broad and in-depth collections of a materials, an effective marketing strategy and adequate levels of staffing by qualified and appropriately-trained staff to provide the necessary support and guidance.

The indicators are applied to five main areas of service provision which are the essential components of a comprehensive service to adult independent learners as identified by the PLAIL Project, namely:

- Information
- Materials
- Equipment and Facilities
- Guidance and Support
- Marketing and Promotion

and it aims to provide basic and straightforward performance indicators in order to assess the most important aspects of services to adult independent learners. The performance indicators presented in this section are deemed to be the most significant for the purpose of evaluating services and assessing their effectiveness, and whilst more detailed indicators could be presented, it is considered that these are sufficiently detailed to give an indication of the levels of service and performance.

Some library authorities, however, may wish to enhance the indicators suggested here by creating more detailed indicators in order to measure and evaluate such aspects as costs, the type of learners who are attracted to the service etc.: much depends on the degree of detail required by individual library authorities. Unnecessary levels of complexity, however, should be avoided and efforts should be made to ensure that any statistical data or response is relevant to the needs of the process of evaluation.

1. Information

Level 1 – Point of Contact

i Provides information about the library

ii. Collates and provides basic information about learning opportunities available locally

iii. Operates a reception and referral service for independent learning enquiries

Level 2 – Point of Service

i. Provides information about the library

ii. Answers adult learning enquiries particularly through using staff specifically trained for this purpose

iii. Maintains a basic collection of reference and 'free' information sources, which may include national training courses beyond local provision, full-time residential and AIL distance learning opportunities locally or nationally e.g. Directory of Further Education, Second Chances, college/university prospectuses

Level 3 – Full study centre service

i. Provides a structured induction to the library targeted at Adult Learners

ii. Answers adult learning enquiries particularly through using staff specifically trained for this purpose

iii. Maintains a comprehensive collection of reference and 'free' information sources, as an integral part of the local adult education/training network e.g. in co-operation with other institutions and libraries and in relation to the job market. The collection will include "access" to certain resources rather than of necessity having to "hold" all resources at a specific site

Performance Indicator	Method
Level of information provision to AILs based on Levels 1-3	Undertake an in-house survey of information provision complemented by a customer survey to verify findings
Customer satisfaction with information provision	Customer survey to assess satisfaction with information provision

2. Materials

Level 1 – Point of Contact

i. Provides basic stock in popular subject areas e.g. language packs

ii. Provides a delivery and collection service for the loan and return of independent learning materials

iii. Provides access to catalogue records of suitable materials

Level 2 – Point of Service

i. Provides basic stock in popular subject areas e.g. language packs and stocks a basic collection of open learning materials e.g. specially–designed packs for loan or for use in the library

ii. Provides flexible loan arrangements suited to the nature of the course material

iii. Provides access to catalogue records of suitable materials

Level 3 – Full study centre service

i. Stocks a wide–ranging collection, for loan or for use in the library, of open learning materials in all appropriate formats, including specially–prepared packs, and, where appropriate, CD–ROM and interactive video media (as new educational formats become available, these would be considered for inclusion in the collection)

ii. Provides flexible loan arrangements suited to the nature of the course material

iii. Provides access to specialist catalogue records of adult learning materials

iv. Provides workbooks and related materials for sale

v. Develop partnerships, in particular with other local providers, to obtain joint access to resources

continued ...

Performance Indicator	Method
Acquisitions spend per capita	Annual expenditure on materials measured against adult population of catchment area of library
Loans per capita	Annual issue figures measured against population of catchment area of library
% loan-to-stock ratio	Annual count measured against stock figures
% of loans proceeding to full service	Loan statistics measured against library records
Customer satisfaction with breadth and depth of stock	Customer survey

3. Equipment & Facilities

Level 1 – Point of Contact

i. Provides basic complementary services, including study space, easy access to library by public transport, parking facilities and easy access for disabled people

Level 2 – Point of Service

i. Provides basic complementary services, including easy access to library by public transport, parking facilities and easy access for disabled people

ii. Makes study facilities available, including the use of a PC and photocopying facilities, including staff assistance in their use

Level 3 – Full Study Centre Service

i. Provides basic complementary services, including easy access to library by public transport, parking facilities and easy access for disabled people

ii. Provides study facilities and full range of equipment, including slide–showing facilities, audio and video playback facilities, CD player, television and video–text, fax facility, photocopying facilities, public telephone/videophone, CD–ROM, Scanner, Multimedia PC, interactive video, including staff assistance in their use

Performance Indicator	Method
Level of provision of equipment and facilities	In–house survey conducted to measure level of provision against Levels 1 – 3
Level of use of equipment and facilities provided	In–house and customer survey undertaken to assess and evaluate current usage
Customer satisfaction with equipment and facilities	Customer survey undertaken to evaluate satisfaction with the provision

4. Guidance & Support

Level 1 – Point of Contact

i. Operates a referral service

Level 2 – Point of Service

i. Provides a basic level of adult guidance and support

ii. Provides advice and assistance with selecting and using material, equipment and other library resources

iii. Provides assistance with searching for information

iv. Provides assistance with using training packs

v. Offers access to in–depth guidance and support with referral where appropriate

Level 3 – Full Study Centre Service

i. Provides designated staff trained to provide a full range of educational guidance and mentoring including assisting with interpreting information, assessing learning needs and goals, identifying level of study required, identifying appropriate subject area, advising on study schedules, providing guidance on effective learning skills, and monitoring and evaluating the learning process

ii. Provides assisted referral and access to local networks able to provide vocational guidance, assists education and training progression with regard to training opportunities, accreditation and tutorial support

iii. Provides services to include self–training support services by creating co–operative networks with other libraries or institutions, on–line tutor service facilitating direct access for AILs to tutors, links with AIL groups/self–study groups, and a two–way referral system i.e. educational establishments to library and vice versa

Performance Indicator	Method
Level of provision of guidance and support	In–house and customer survey to assess and evaluate level of guidance and support
Customer satisfaction with support services	Customer survey to evaluate satisfaction with service

5. Marketing & Promotion

Level 1 – Point of Contact

i. Promotion of services through leaflets and other printed literature

ii. Conducts customer and service surveys to evaluate Level 1 services to adult independent learners

Level 2 – Point of Service

i. Promotion of services through leaflets and other printed literature

ii. Personalised dissemination of services to target customer groups and individuals, including new members of library, and to sources other than the library e.g. other libraries, educational institutions, centres or agencies which may be relevant to adult independent learners

iii. Marketing of services through regular contact with the press and media

iv. Conducts customer and service surveys to evaluate Level 2 services to adult independent learners

Level 3 – Full Study Centre Service

i. Promotion of services through leaflets and other printed literature

ii. Personalised dissemination of services to target customer groups and individuals, including new members of library, and to sources other than the library e.g. other libraries, educational institutions, centres or agencies which may be relevant to adult independent learners

iii. Marketing of services through regular contact with the press and media

iv. Marketing and promoting the service via a regular programme of promotional events, through links with the local community, educational and professional bodies, advice agencies and employment and training organisations

v. Conducts customer and service surveys to evaluate Level 3 services to adult independent learners

Performance Indicator	Method
Level of marketing and promotion of services measured against Levels 1–3	In–house–survey based on library records
Effectiveness and success of marketing strategy	In–house survey undertaken based on library records of response to marketing, supported by customer survey

8. The Future

For many people in today's society, the education and training system was neither flexible, efficient, nor particularly fair in its distribution of resources, especially to those who were unable to meet the entry requirements and the criteria of formal educational establishments. Consequently many adults were unable to study full-time and achieve their vocational goals. It is also widely acknowledged by education specialists that adults learn differently, that they have a different perspective on education as a result of various 'life experiences ' and that they possess an increased desire for self-improvement and to achieve specific learning goals and qualifications at specific times of their lives.

As a backdrop to these changes in the public and organisational perceptions, there is also the increasing pace of social and technological change impacting on jobs as well as the traditional rôles of worker, student, housewife, etc. There is now much more flexibility required of the education and training systems to meet this increasing pace of change and changing rôles of the clients.

It is anticipated that the 'one job for life' career will disappear owing to the rapid change of organisations brought by technology. Organisations will become much more flexible, increasing and structuring their workforce rapidly to cope with supply and demand of a global market place. Public sector workers will also feel the impact of tight budgetary constraints as well as the increasing expectations of society requesting better services from fewer resources.

Education and training is fundamental to developing the individual to cope with these changes. The attitudes and abilities of learners and workers in the next century are fundamental to the success of maintaining social structures. A crucial aspect to the market place in the future is the need for individuals to be entrepreneurial in their own development and in selling their own skills.

Libraries will also be impacted by the general economic changes as described above but will also be impacted by the specific demands of adult learners who have experienced changing economic conditions and a different educational system which will make them more sophisticated and intellectually adaptable and who will, therefore, have higher expectations from libraries. They will become more active consumers in terms of what libraries can and should do to enable them to meet their information and skills training needs.

The library has traditionally been seen as the cultural centre, the information point in towns and villages, and the key place for the cultural life of society. The library is also perceived as 'neutral' owing to its public-funded nature, based on the premise that information, knowledge and education are a prerequisite to a healthy society. Increasing acceptance of open learning as described in its wider sense of informal student-centred learning has extended library provision into the arena of education and training and at the same time Governments are realising that lifelong learning, and attitudes to re-training, must be improved.

Technology also has become increasingly available and accepted in home, school, work, etc., as part of the general infrastructure of learning.

If it is accepted that organisational and social changes will lead to a distributed workforce linked by telecommunications across the globe and also that many companies will seek cheaper labour outside the European Union (e.g. the Pacific Rim, India, etc.) and that the organisations which will be successful in the future will be those which adapt quickly, are knowledge-based and nimble in that they can identify market opportunities and exploit them quickly, then this will have impact on the support for learners in the future. There will be higher demands and priorities based on acquiring and distributing knowledge.

There will also be an increasing number of people who will be using the information highways to earn a living, changing or seeking jobs, or promoting products and services. The advent of new standards for digital video disks which will have five times the storage capacity of existing CD-ROM combined with the next generation of blue laser technology means that storage ceases to be a problem, even for high definition video storage.

Also, multinational software companies like Oracle will develop 'communication type' computers designed for the home market place, to exploit the potential of telecom networks carrying video and entertainment with the result that there will be a rapid shift towards distributed shopping, entertainment, financial services, information services, etc.

It is probable that every home will have a computer (this is what the TV of the future will become) and that every home will have an Internet link. Every home will probably have some intermediary service provider (either through cable company or existing service providers) and will therefore have an interactive capability, i.e. they will be able to send as well as receive information. As such, every home will therefore have the ability to access educational and training opportunities, to be sold or to be able to negotiate a full range of services ranging from jobs and opportunities through to hobbies and video conferencing with friends. Since the nature of technology is digital there will be high quality stereo sound and high definition television available through cable or satellite links. The information (entertainment and intellectual content) will be accessible to users in their own time in that programme schedules will be largely determined by the users.

The impact of these technological improvements on libraries could well be considerable. The knowledge-base will change and how knowledge is accessed will change. The convergence of entertainment and education will mean that the categorisation and separation of books and technology, CD-ROMs, etc. will become redundant as more and more publishers produce materials exclusively on CD or digital formats. Educational organisations may look to public libraries to support their learners as they extend their provision in a very competitive environment outside their local area. New skills and support structures will be required to enable the handling and accessing of resources when courses and programmes are contained in distributed databases throughout the world.

The key questions in the context of this study, therefore, are how can libraries change appropriately to support learners using the technologies which are currently becoming available; how they identify what is good practice and what has to be changed; how to equip learners to maximise the undoubted opportunities and avoid the many pitfalls; and also how to continue with the function of supporting those who do not have access either through having no employment or resources – the information poor.

In terms of the PLAIL Project, the process has begun in a small way with a change of attitudes in the partner countries to the need to support learners and in the use of technology for staff training which will also be increasingly used to deliver or enable learning. Operating in a pan-European context is especially valuable in that not only are ideas and information exchanged but also practical materials which can be versioned to suit appropriate cultures and which can be utilised both to avoid duplication of effort and to provide a common framework for development.

The results of the PLAIL Project are therefore relevant in terms of providing appropriate training resources for librarians together with authoritative support material which identifies the needs of independent learners, defines the skills and competencies required by librarians to support adult learners and which provides indicative performance indicators and service levels. This will inevitably be beneficial.

Key recommendations

Librarians should:

- Through appropriate investment in IT, develop and utilise technologies to other adult independent learners;

- Develop their skills in the use of IT., break down the boundary between IT for cataloguing systems etc., and provide a linked infrastructure;

- Promote the library as a supporter of learning rather than a repository of books;

- Develop their computer provision in order to establish interlinking networks, locally, nationally and internationally and consequently place libraries at the centre of the learning support world;

- Endeavour to participate in the creation and development of learning programmes, either through staff participation or by materials development in multimedia training packages;

- Endeavour to bridge the gap between the information rich and poor of service to community and service to individuals by assessing the service to adult independent learners, publishing standards and a mission of what people and organisations can expect from the public library;

- Endeavour to influence the appropriate national/regional/local institutions in their respective countries to establish model or exemplar public library services for adult independent learners as the most effective means of stimulating the establishment of such services in other communities. This could be achieved through political, media and community interest generated by high–profile, successful new services;

- Impress upon the European Commission the value of projects such as PLAIL and to encourage further projects to build upon the success of the PLAIL Project.

9. Appendix 1

Project Deliverables

1. **The Needs of Adult Independent Learners**

   I.S.B.N. English edition: 1 85991 007 6
   Spanish edition: 84 . 87741 . 01 . 0
   Portuguese edition: 972-565-198-7

2. **The Use of IT in Staff Training and in Support of Adult Independent Learners in Portugal, Spain and the UK**

   I.S.B.N. English edition: 1 85991 008 4
   Spanish edition: 84 . 87741 . 03 . 7
   Portuguese edition: 972-674-138-6

3. **The Skills and Competencies Required by Librarians to Support Adult Independent Learners**

   I.S.B.N. English edition: 1 85991 014 9
   Spanish edition: 84 . 87741 . 05 . 3
   Portuguese edition: 972-565-219-3

4. **Levels of Provision of Services to Adult Independent Learners and Related Performance Indicators**

   (Included in the final project report)

5. **The Learning Curve: an interactive training pack** – video & CD-ROM

   Pilot training pack produced in separate English, Portuguese and Spanish versions

Appendix 2

CD-based Digital Interactive Multimedia Solutions

A range of digital technologies can now offer the delivery of full-frame motion video from data stored either on a computer's hard disc drive or on compact disc. The quality of motion video as delivered by the first generation of digital solutions fell short of that available from analogue laser disc technology, but this issue has been addressed by the arrival of faster and affordable desktop and portable computers together with the emergence of world standards for playback of digital video from CD. The dominance of the Windows 3.1 operating system from Microsoft and the publication of the MPC (Multimedia PC standard) have enabled the market place to open up, with developers delivering products which will run on any PC which subscribes to the MPC standard.

The CD-ROM drive has already established itself as an essential component of the PC system. Used as a mass read-only storage device, users can tap into vast data resources. CD-ROM provides a very convenient vehicle for the distribution of computer-based training materials as CD-ROM disks can retain up to 640Mb of data.

Libraries were quick to tap the power of CD-ROM as a mass storage and text retrieval device and should be well positioned to extend the functionality of this existing hardware to deliver interactive multimedia titles.

The Multimedia PC (MPC) standard defines a number of hardware and software extensions which allow users to upgrade a standard PC for the delivery and/or development of multimedia materials. The Video for Windows and Quicktime technologies now enable the playback of short video clips on a standard PC without the need for costly additional video accelerator cards or video overlay boards. The digital video is typically stored on a CD-ROM and plays back in a small window. Powerful 'state of the art', for example Pentium-based PCs and Power PCs, are now able to play back digital video with acceptable image quality and sound synchronisation in windows up to half the size of the screen. Less powerful machines, for example 468sx based PC's, will be able to play back the video in a small window.

When considering the purchase of Windows based PC it should be ensured that the hardware subscribes to the MPC level two (or subsequent) standard. Consideration should be given to the fact that many 'standard' applications, for example Word Processing applications, come with extensive tutorial support. Many applications are now distributed on CD-ROM with multimedia tutorial support integrated with the product. The small additional expenditure required to ensure that newly purchased hardware is 'multimedia ready' is well worth making!

The minimum hardware specification for a PC which subscribes to the MPC level 2 standard is:

486 SX microprocessor
4Mb of RAM
160 Mb hard disc
Super VGA 640 * 480, 16 bit colour
double speed CD-ROM 16-bit
recording and playback card with Musical Instrument Digital Interface (MIDI)
Joystick port
Stereo speakers or headphones
Microphone
Microsoft Windows 3.1

[It should be noted, however, that this specification may already have been superseded by recent technological advances e.g. a minimum of 16Mb of RAM and 1Gb+ of hard disc memory is now commonly recommended for many applications, and Windows '95 and 32-bit applications are now well established.]

The 'White Book' standard provides developers with a common standard for the delivery of video on CD. When purchasing new PC hardware a prudent move is to ensure that the equipment at least meets the current MPC standard as detailed above. In addition, consideration might be given to the purchase of a CD-ROM drive which is 'white book' compatible. Ensuring that CD-ROM drives are 'white book' compatible will enable a PC to be used as a delivery platform for video CDs and other applications which feature digital video. At the time of writing only a few manufacturers of CD-ROM drives have disc access times which are fast enough to allow the products to be labelled as 'white book' compatible. The M-PEG video compression is also an emerging standard for compression and playback of digital video and personal computers are likely to upgraded with M-PEG decompression hardware where playback of full screen full motion video CD is required on the PC.

In summary, personal computers which meet the current MPC standard are ready to run all existing MPC CD-ROM titles and are able to playback video clips in a window. Machines which feature very fast CD-ROM drives which are 'white book' compatible and are equipped with a M-PEG video decompression cards are ready to playback the new generation of video CD titles which feature full screen full motion video.

Another compact disc-based technology is Philip's CD-i (Compact Disc Interactive), a one-box interactive entertainment and information system based on a CD-ROM drive with an on-board 68000 processor from Motorola. The technology is currently targeted at home and corporate training usage, and an add-on FS FM (Full Screen Full Motion) Video cartridge allows VHS quality motion video to be delivered. Many generic training titles which were previously available only as IV titles are now available in CD-i format.

A CD-i player is a stand alone 'black-box' device which subscribes to the 'interactive television set' philosophy where materials are viewed via a television monitor and interactively gained via an infra-red joystick device.

The capacity of CD-i (like other forms of compact disc technology) equals up to 640 MB of data, or 74 minutes of CD quality stereo sound, or sixteen hours of mono speech, or 6000 television quality images. Combinations of these elements are typically featured in CD-i applications.

The first CD-i titles to appear in the market place were firmly aimed at the home entertainment and education market. CD-i format training applications are now coming on stream and with the arrival of the FS FM video option CD-i could become a powerful contented as a cost-effective training delivery mechanism. CD-i players can be purchased for as little as £500.

Objections to CD-i are that the solution is 'stand alone' with no option for networking. Control of CD-i via the 'joystick' controller restricts user interaction mainly to 'button clicking', a fact that detracts from using the technology where more involved user interaction is required (for example, keyboard input). CD-i also features its own unique Compact Disc Real Time Operating System (CD-RTOS). This fact dictates that interactive titles for playback on CD-i players will not be compatible with other platforms, for example MPCs. However, disks produced to the 'white book' standard which deliver video CD will be playable across all platforms, the common denominator being a 'white book' compatible CD-ROM drive and M-PEG video decompression chip.

Providing an informed viewpoint on the future of CD technologies and digital solutions is difficult, as at present the scene is rapidly changing and the major players are jockeying for position, making alliances, or simply waiting to see who will set the standards to follow. The holy grail of providing full screen full motion (FS FM) video cheaply and easily will be achieved by using compression algorithms, with the resulting trade-off in quality. However, the combination of increasing processing power, lower prices and better software solutions makes the move towards digital solutions irresistible. Once the consumer market takes off, the education and training market will follow.

2. Communications

Although not really a learning technology as such, communication technologies are rapidly becoming a key component of the training solution of some organisations. With the introduction of ISDN (Integrated Services Digital Network), the video phone and the PC-based video-conferencing solution, the technology is now available to overcome the problems of communication at a distance. There have always been sound commercial reasons for incurring the costs of an on-line connection to provide vital information such as share prices or banking information. However, training and educational use of communication technologies has less direct playback, other than gaining an immediate response from the learner.

Up until now it has been the preserve of companies large enough to justify the cost. However, the combination of increasing availability and decreasing costs of hardware, and the growing awareness of the benefits of communication technologies in reducing travelling time will make it one of the growth areas of the next decade.

Communication technologies will play an increasing rôle in the delivery of training. Satellite delivery will probably continue to satisfy a niche within the market, due to the expense and availability of other more nimble and responsive technologies. Desktop video conferencing is set to become an affordable addition to the standard functionality of the office personal computer. The ability to transfer data files directly from desktop PC to desktop PC makes the technology a powerful tool for training, as it does for business communications generally. Most libraries have local area networks installed and, increasingly, are linked to other sites via networks. It would be prudent to increase the return on this investment by utilising the technology to deliver training to the learners desktop PC. This marriage of interactive multimedia technologies and telecommunications will bring about a powerful training system which will place new demands on the trainer, both in designing new learner support systems as well as in general technical expertise.

Appendix 3

Dissemination activities and Exploitation Strategy

1. Dissemination activities

The PLAIL Project partners, from a very early stage, undertook a positive strategy towards the dissemination of its activities and deliverables and took advantage of every appropriate opportunity to promote the project.

Listed below is a summary of its activities during the lifetime of the project, including attendance at conferences, radio and television interviews and broadcasts, articles in the press and professional journals.

An exploitation strategy is included in Section 2 of this appendix.

1. Conferences

Belgium: EFLC/EBLIDA/LIBER Congress (International)
Bruxelles, October 1994

Germany: Deutscher Bibliothekartag Conference
Gottingen, June 1995

Greece: Libraries Without Walls (International)
BIBDEL Conference, Lesvos, September 1995

Netherlands: Telematics for Regional Development (International)
European Open University Network, Heerlen, September 1995

Portugal: National Congress of Librarians, Archivists & Documentalists
Lisboa, January 1994

Spain: Jornadas Españolas de Documentación Automatizada Conference (FESABID)
Gijón, October 1994

2a Jornada de Fomento de la Lectura: Formación y Reciclaje
Barcelona, November 1995

UK: Public Libraries, Open Learning and Local Training Needs (International)
North Wales Training & Enterprise Council/Clwyd Library & Information Service/Gwynedd Department of Culture & Leisure, February 1995

A Period of Change
Welsh Library Association, Aberystwyth, June 1995

Rural Based Distance Learning Strategies (International)
North Wales UETP/NEWI, June 1994

Turkey: IFLA Conference, Project Exhibition (International)
Istanbul, 1995

2. Seminars

Portugal: PLAIL Seminar (WP3), Setubal, September 1994

PLAIL Project Seminar (WP 10), Lisboa, January 1996

Spain: PLAIL Seminar (WP3), Gijón, September 1994

PLAIL Project Seminar (WP 10), Madrid, February 1996

UK: Adult Education Seminar, Community Librarians, Clwyd, July 1994

PLAIL Seminar (WP3), Clwyd, September 1994

PLAIL Seminar (WP10), Glasgow, January 1996

3. Journal Articles

Portugal

Boletim Informativo da Base Nacional de Dado Bibliográicos, October 1993

Cadernos de Biblioteconomia, Arquivista e Documentação, 1994

Spain

Asociación Española de Archiveros, Bibliotecarios, Museólogos y Documentalistas, (ANABAD) July/September 1994

Boletin de la Asociación Asturiana de Bibliotecarios, Archiveros, Documentalistas y Museólogos (AABADOM), April/June 1995,

El Comercio, 6 June, 1994, 14 September, 1994

Educaión y Biblioteca, September 1994
Revista de Educaión a Distancia, June–September 1994,

"Programas de Autoformación para lectores adultos en las bibliotecas. Programa PLAIL Public Libraries and Adult Independent Learners (Bibliotecas Publicas y Estudiantes Independientes)" . Published in Minutes of FESABID Conference (see p.1), University of Oviedo, 1994

UK

Adults Learning, Summer 1994

Assistant Librarian, May 1994

Chester Chronicle, 11 February 1994

COMETT News, Winter 1993/94

Current Research, September 1994

Daily Post, 7 February 1994

EADTU News (European Association of Distance Teaching Universities), July 1995

Learning in a Global Information Society, September 1995

Library Association Record (Review of Project Report), March 1995

Library Technology News, June/July 1995

Program: automated library & information systems, October 1995

Public Library Journal, July/August 1994, September/October 1994, September/October 1995

Society of County Librarians: Information, December 1994

Update/Newyddion, (Clwyd Library & Information Service Newsletter), Winter 1994, Summer 1995, Spring 1996

Welsh Library Association News, March 1994, April 1994, January 1995

Western Mail, 8 February 1994

4. Radio & Television

Televised Press Conference, Gijón, September 1994

Radio interview, Gijón, September 1994

Programme on PLAIL Project, Open University production & broadcast, Portugal, 1995

Radio Interview, BBC Radio Cymru, Wales, January 1996

5. Internet

Brief details about PLAIL Project on Internet

6. International Contacts

Review copies of reports, journal articles and marketing material distributed to contacts in:

Australia
Austria
Germany
Indonesia
Portugal
South Africa
Spain
UK

2. Exploitation Strategy

1. Press & Publicity

Regular Press Releases:	On 'newsworthy' developments within the project Local and national press Professional journals
Send 'flyers' to:	All library authorities Open Learning centres Government offices & quangos
Send review copies of reports to:	Professional journals in Librarianship Professional journals in Open Learning Professional journals in Education & Training
Send copies of reports to:	National bibliographic office

Place articles in appropriate journals on specific Project Reports

Contact organisations within library sector and education & training to offer our services as speakers

Utilise world-wide platform of the Internet to 'advertise' project

2. Project Seminars

Three project seminars, one in each partner country, to disseminate the findings and recommendations of the PLAIL Project.

Designated number of Steering Group members to participate in each event.

Seminar delegates could include people from national & regional library authorities, national & regional training units from different government institutes of employment, the Open University etc.

3. Main Project Report

The final project report to contain the main findings and recommendations of the project and to be promoted via the methods listed above.

3. Important points about the project which should be highlighted as part of a publicity strategy

The PLAIL Project has:-

1. Identified the needs of adult independent learners
2. Presented a phased development programme in IT
3. Defined the skills and competencies required by librarians to provide a comprehensive public library service to adult indpendent learners
4. Produced performance indicators for public library services who wish to establish, or who are already providing, services to adult independent learners
5. Produced a training pack (video & CD-ROM) to train professional librarians to identify the learning needs and goals of adult independent learners

Appendix 4

Bibliography

Scope

This select bibliography was compiled following an extensive search through several bibliographic sources in Portugal, Spain and the U.K. so that an analysis of the items could be undertaken in order to identify the needs of adult independent learners and identify the skills and competencies required by librarians to support adult independent learners.

All entries are restricted to items published after 1980 because many of the significant developments and changes to services to adult independent learners, especially in the U.K., occurred after this date. Indeed, most items published after 1990 are better informed regarding the current provision of services to adult independent learners since the major developments occurred primarily during the late 1980s. However, the number of items available in Portugal and Spain are restricted owing to the lack of research which has been undertaken in both countries.

AGENCIA REGIONAL DE EMPLEO
Memoria de actividades 1993, S.1.
(Oviedo), Consejería de Industria, Turismo y Empleo, 1994

ALLRED, John
Libraries and open learning services to the public in *Public Library Journal*,
January/February 1992, p10

ALLRED, John
The Library as an educational resource in *Public Library Journal,* January/February 1990,
pp1–5

ALLRED, John
The rôle of public libraries in open learning in *Assistant Librarian*, June 1983, pp82–85

ALLRED, John & HEEKS, Peggy
Open learning in public libraries: evaluation of an Employment Department Training
Agency Initiative, by the Library Association for the Training Agency
Sheffield: Training Agency, 1992

AMAT I NOGUERA, Nuria
Documentación cientifica y nuevas tecnologías de la información
Madrid: Piramide, 1989

ASOCIACION NACIONAL DE CENTROS DE ENSEÑANZA A DISTANCIA
Estudio cualitativo sobre la situación de sistemas de enseñanza a distancia en nuestro país, resultados sobre individuos particulares: resultados sobre líderes de opinión, S.1. s.n., 1988

ASOCIACION NACIONAL DE CENTROS DE ENSEÑANZA A DISTANCIA
Informe de resultados estudio de mercado sobre enseñanza a distancia: Fase cuantitativa, S.l., s.n., 1989.

BAGLEY, B. & CHALLIS, R.
Inside open learning
Bristol: Further Education Staff College, 1985

BAMBER, Anthony L.
Look up – and learn: Library Association adult independent learning guidelines for libraries and learning resource centres
London: LA Publishing, 1992

BAMBER, Anthony L (ed)
Supporting Adult Learners
London: Library Association Publishing, 1994

BARNES, Carole & ALLRED, John
Educational guidance for adults and public libraries: report of the 1989/90 survey undertaken by the National Educational Guidance Initiative and the Library Association
Leicester: National Institute of Adult Continuing Education on behalf of the Unit for the Development of Adult Continuing Education, 1991

BARNES, Melvyn
Public Libraries in *Librarianship and Ifnormation Work Worldwide 1991: An Annual Survey*
London:: Bowker–Saur, 1991

BATT, Christopher
Information Technology in Public Libraries
London: Library Association Publishing, 1992

BELCHOIR, Margarida et.al.
As Novas Tecnologias de Informaçãó no 1º ciclo do ensino básico
Lisboa: GEP, 1993

"BIBLIOTECA Y EDUCACIÓN DE ADULTOS", 35 (1993), Educación y biblioteca, Madrid, Tilde.
[Offers a complete overview of the titles published in Spain on adult education and literacy, grouping them together in two major categories: the commercial publishing sector and the production of teaching materials prepared by public institutions and the adult education centres themselves]

BIRCH, D.W. & LATCHAM, J.
Managing open learning systems
Further Education Staff College, 1985

BIRMINGHAM OPEN LEARNING DEVELOPMENT UNIT
Developing open learning
Birmingham: BOLDU, n.d.

BLAXTER, Lorraine & TIGHT, Malcolm
Time management and part-time study in *Adults Learning, January* 1994, pp126-127

BOSWORTH, David P.
Open learning
London: Cassell, 1991

BRAMLEY, Gerry
Adult literacy basic skills in libraries
London: Library Association Publishing, 1991

BRITAIN 1994: An Official Handbook
London: HMSO, 1993

BRITISH LIBRARY
Libraries and Information in Britain: The Information Partnership
Wetherby: The British Library, 1992

BROCKETT, Ralph G.; Roger HIEMSTRA: El autoaprendizaje autodirigido en la educación de adultos: perspectivas teóricas, prácticas y de investigación, Barcelona, Paidos, 1993.

BROWN, Jonathan
What is Educational Guidance? *in* Adults Learning, Vol 2, No. 10, June 1991 pp277-278

BUTLER, Linda
Case studies in educational guidance for adults
Leicester: National Institute of Adult Continuing Education, 1984

BUTLER, Linda
The rôle of public libraries in the provision of educational guidance for adults (Library & Information Research Report 22)
London: British Library, 1988

CAEIRO, Domingos
Da aura ao simulacro: imagem, video e ensino a distância
Lisboa: Universidade Aberta, 1994

CALDER, J.
Adult learning and continuing education in *Institutional Research Review*, No 1, 1982

CARMO, Hermano
Formação de professores a distancia: a experiência da Universidade Aberta de Portugal
Lisboa: Universidade Aberts, 1992

CARMO, Margarida de Abreu Salomão de Oloveira e
Formação contínua a distância: enquadramento conceptual e metodologia
Lisboa: Universidade Aberta, 1993

Catálogo de edições da UA
Lisboa: Universidade Aberta, 1994

Catálogo de videos: Curso 92-93
Gijón: Centro de Profesores, 1992

Catálogo de videogrammes, 1990
Lisboa: Ministério da Agricultura; Divisão de Apoio Técnico e Audiovisual, 1991

CD-ROM, Catálogo 93-94
MAdrid: Paradox, 1993

CD-ROM 93-94
Madrid: LUA, 1993

CENTRE VALENCIÁ D'EDUCACIÓ D'ADULTS A DISTANCIA: Técnicas de estudio,
Valencia: Consellería de Cultura, Educació i Ciencia, 1991.

CENTRO DE DISEÑO Y PRODUCCION DE MEDIOS AUDIOVISUALES
Guía de los medios audiovisuales
Madrid: UNED, 1993.

CENTRO REGIONAL DE INFORMACION Y DOCUMENTACION JUVENIL
Educación en Asturias
Oviedo: Consejería de Educación, Cultura, Deportes y Juventud, 1992.

City and Guilds 7282 ADDFOL
Training and Development Award (Flexible and Open Learning)

CLARKE, A.. COSTELLO, M. & WRIGHT, T.
Rôle and tasks of tutors in open learning systems
Industrial Training Research Unit, 1986

CLWYD COUNTY COUNCIL
Learn with your library: a guide to effective learning for users and staff
Mold: Clwyd County Council, 1990

CLWYD COUNTY COUNCIL
Report of the open learning and public libraries project 1988-89
Mold: Clwyd County Council, 1989

CLWYD COUNTY COUNCIL
Second chance centre: the final report [of] a joint project between Clwyd County Council Education Department and Library & Information Service
Mold: Clwyd County Council, [1992]

CLWYD COUNTY COUNCIL & GWYNEDD COUNTY COUNCIL
Enhancement of Flexible and Open Learning in North Wales: the Development of Accredited Support for Adult Learners
Clwyd Library & Information Service

COFFEY, J.
Development of an open learning system for further education (Working Paper 15)
London: Council for Educational Technology, n.d.

COMMISSION OF THE EUROPEAN COMMUNITY DGXIII/B
State of the Art of the Application of new Information Technologies in Libraroes and their Impact on the Library Functions: a Reassessment – Synthesis
Luxembourg: Commission of the European Community, 1992

COUNCIL FOR EDUCATIONAL TECHNOLOGY
Making open learning work
London: Council for Educational Technology n.d.

COUNCIL FOR EDUCATIONAL TECHNOLOGY
Public libraries and adult independent learners
London: Council for Educational Technology, 1987

COUNCIL FOR EDUCATIONAL TECHNOLOGY
Training awareness pack [published to accompany 'Public Libraries and adult independent learners by Vernon Smith (q.v.)]
London: Council for Educational Technology, 1987

DA COSTA CORBELLO, Carlos
Introducción a la informatica documental
Madrid: Síntesis, 1993

DALE, S.
Guidelines for training in libraries, 8: distance learning
London: Library Association, 1986

DAVIES, T.C.
Open learning systems for mature students (Working Paper 14)
London: Council for Educational Technology, n.d.

DAVIES, W.J.K.
Open and flexible learning centres
London: NCET, 1989

DEPARTAMENTO DE ESTUDIOS DEL INBAD: EL INBAD visto por sus alumnos: 1ª parte, s.l., s.n., (1983).

DEPARTAMENTO DE ESTUDIOS DEL INBAD: EL INBAD visto por sus alumnos: 2ª parte, s.l., s.n., (1985).

DINIZ, Terezinha
Universidad abierta, educación a distancia: Una alternativa de educación superior
Madrid: UNED, 1992.

Documentacion de medios, Micronet
(Contains indexes and summaries of articles from over 75 Spanish and foreign newspapaer and magazines; 75,000 new entries annually)

DOLAN, John & BARRETT, Jane
Libraries and educational guidance: a partnership for quality in *Library Association Record*, July 1987, pp330-332

DURRELL, Julie
Resources based learning: using open and flexible learning resources for continuous development
Maidenhead: McGraw-Hill, 1993

DRODGE, Stephen
Open learning in libraries in *Assistant Librarian*, October 1983, pp144-145

Edicinco (Catálogo de Software educativo)
Valencia: Edicinco, 1993

EDUCACIÓN PERMANENTE EN LAS SOCIEDADES AVANZADAS: Jornadas: Calatayud 21, 22 y 23 de septiembre 1990, Zaragoza, Diputación.

LA EDUCACIÓN PERMANENTE: Jornadas organizadas por la UNED: Gijón, 1987
Gijón: UNED, 1988.

LA EDUCACIÓN PERMANENTE: Perspectivas a nivel nacional e internacional: Actas de la II Jornadas organizadas por la UNED: Gijón 1989
Gijón: UNED, 1990.

El professor an casa (Catálogo)
Madrid: Cold Chip, 1993

EMPLOYMENT DEPARTMENT
Ensuring quality in open learning - a handbook for action
Sheffield: Employment Department, 1990

ENCONTRAR CURRO: La lucha de los jóvenes por insertarse en un mercado laboral cada vez más estrecho, inseguro y competitivo in *El País* (Madrid) (6-3-1994)

Ensanta asistida por denador, Catálogo
Madrid: Centro de Orientalción de Sociología y Psicología, Aplicadas, 1993

ESTALAYO, María
Profesores con futuro: cómo preparse para los nuevos trabajos in *Muy Interesante* (Madrid), 156 (1984), p.71.

ESTELL, G.R.
Staff development for open learning tutors
London: Further Education Unit/Professional, Industrial & Commercial Updating, 1986

EUROFORM: aspectos e perspectivas de formação a distância na Europe
Lisboa: CEDEFOP/IPED, 1986

FAZENDA, João, e outro
Alternitativas ao sistema formal de ensino. Conceitos e prácticas. O caso português
Lisboa: Gabinete Estudos Planeamento, 1985

FEATHERSTONE, Tom
Model Standards for public Libraries in *Library Association Record* Vol 96)2) February 1994, p96.

FISHER, Raymond K.
Library services for adult continuing education and independent learning (Library Association pamphlet 40)
London: Library Association Publishing Ltd., 1988

FOGGO, Tom & BARLETT, Gill
Financial Management for Librarians
Glasgow: NTG/SCET, 1993

Forum CD-ROM, I. Technologica, produtus e aplicação em bibliotecas e serviços de documentaçãol Separat dos 'Cadernos BAD' (1), Lisboa, Associação Portugesa BAD, 1991

FOULKES, Pat & WELLINGS, Nick
Return to study: self-study booklet
Luton: Luton College of Higher Education, n.d.

FOX, John; Jan POWELL
Un mundo alfabetizado
Madrid: Ministerio de Educación y Ciencia, 1992.

FRESHWATER, M.
How open is open?
London: Manpower Services Commission, n.d.

FURTHER EDUCATION UNIT/MANPOWER SERVICES COMMISSION
Implementing open learning in local authority institutions: a guide for institution managers and local authority officers
London: Further Education Unit/MSC, 1987

GARCIA LLAMAS, José Luis
Estudio empírico sobre el rendimiento académico en la enseñanza a distancia
Madrid: UNED, 1986.

GUERIN, Claudie
The Children's Resource Centre of the City of Sciences and Industry in *Audiovisual Librarian* 194, November 1993, pp 303–304

HARTRIDGE , Digby
GOLD in the Forest of Dean; an open learning project centred on Cinderford Library: report produced for the Training, Enterprise and Education Directorate
Gloucester: Gloucestershire County Library, Arts & Museum Service, 1991

HAUTECOEUR, Jean Paul (dir.)
Alpha 92 estrategias de alfabetización
Madrid: Ministerio De Educación y Ciencia, 1992.

HERRANZ ABALOS, Mª Angeles; Vicente SAURI PASTOR (coord.)
La educación a distancia de personas adultas en la Comunidad Valenciana
Valencia: Consellería de Cultura, Educació i Ciencia, 1990.

HODGSON, Barbara
Key issues in open and distance learning
London: Kogan Page, 1993

HODGSON, Vivien et.al.
Beyond open learning: towards open learning
Buckingham: Open University Press, 1987

Infoware: a reposta dos anos 90
Lisboa: INCITE, 1992

INNOVA Multimedia (Catálogo)
Madrid, 1993

INSTITUTO DE FORMAÇÃO BANCÁRIA
Cursos regulares de formação bancaria. Comunicação escrita e oral
Lisboa: Instituto Formaçao Bancaria, 1989

INSTITUTO DE FORMAÇÃO BANCÁRIA
Cursos regulares de formação bancaria. Microinformática
Lisboa: Instituto Formação Bancaria, 1989

JABONERO BLANCO, Mariano
La escuela del futuro: el aula virtual in *Fundesco* (Madrid), 1992.

JOVER TORREGROSA, Daniel; MARQUEZ RUIZ, Francesc
Formación, inserción y empleo juvenil: apuntes desde una experiencia
Madrid: Popular, 1988.

LABORDA, Javier
Informática y educación Tecnicas fundemaentales
Barcelona: Laia, 1986

LAGARTO, José Reis
Formação profissional a distância
Lisboa: Universidade Aberta, 1993

LAMBER, E
CD-ROM, el nuevo papiro
Madrid: Anaya Multimedia, 1987

LEVILLAIN, Maud
Audiovisuals at the Resource Centre of the City of Sciences and Industry in *Audiovisual Librarian*, 19 (4), Novemebr 1993, pp. 299-301

LEWIS, R.
How to help learners assess their progress (CET open learning guide no. 2)
London: Council for Educational Technology, 1984

LEWIS, R.
How to tutor and support learners (CET Open Learning Guide no. 3)
London: Council for Educational Technology, 1984

LEWIS, R.
How to tutor in an open learning scheme: self-study version
Council for Educational Technology, 1981

LEWIS, R. & PAINE, N.
How to communicate with the learner (CET Open Learning Guide no. 6)
London: Council for Educational Technology, 1985

LEWIS, R. (ed.)
How to develop and manage an open learning scheme (CET Open Learning Guide no. 5)
London: Council for Educational Technology, 1985

LEWIS, R. (ed.)
Open learning in action
Council for Educational Technology, 1984

LEWIS, Ray
Counselling in open learning
Cambridge: National Extension College, 1980

LEWIS, Roger
NEC guide to open learning
Cambridge: National Extension College, [c. 1986]

LEWIS, Roger & SPENCER, Doug
What is open learning? (CET Open Learning Guide no. 4)
London: Council for Educational Technology, 1986

LIB2: ponto da situação da aplicação das novas tecnologias de informação às bibliotecas e o seu impacto na actividade das bibliotecas em Portugal – actualização
Lisboa: BAD, 1992

LIBRARY ASSOCIATION
Supporting adult learners: a guide to library staff competencies
London: Library Association, 1993

LINDSAY, K.
Open learning in public libraries in *Scottish Libraries*, October 1989, p5

LINE, Maurice (ed)
Librarianship and Information Work Worldwide 1992: An Annual Survey
London: Bowker-Saur, 1993, p208

Linea 10
Madrid: Micronet, 1993

LOOMS, Peter Olaf
O uso da rádio em projectos de educação a distância par adultos in *Comunicação de massas e ensino a distância*
Lisboa: Instituto Português de Ensino a Distância, 1982, pp207-215

LOPEZ PUPEREZ, F.
La responsabilidad de la educación in *El País* (Madrid) (12-4-1994).

MACHADO, Altamiro Barbosa
Da oralidade aos mundos virtuais: uma reflexão acerca dos sistemas multimedia, Braga, ed. A., 1993

MARRIOTT, Richard
How well do libraries inform their public? in *Library Association Record*, March 1993, Vol 95 (3), pp164-167

MARQUES, Maria Emília Ricardo, A tecnologia educativa numa encruzilhada de caminho, Macau, s.n., 1991

MARTINEZ MEDIANO, Catalina
Factores de eficacia de los Centros asociados de la UNED
Madrid: UNED, 1993.

MARTINEZ PARRA, Enriqueta; Francisca PLEGUEZUELOS AGUILAR
Como ayudar al adulto en su adaptación al trabajo intelectual in *Boletín Informativo del INBAD,* (Madrid), 3 (1987).

MASON, Tony, Self-issue system is on view at LRE in *Library Association Record*, June 1993, Vol 95 (6), p336

MASON, Tony, Umist launch pad for new DNH commission initiative in *Library Association Record*, August 1993, Vol 95 (8) pp424-425

MAUGER, Simon
Open learning tutor skills: a flexible learning course for people working in open learning
Bradford Peverell: Language House, 1991

MAUGER, Simon & BOUCHERAT, Jacky
Skills for open learning tutors
Bradford Peverell: Language House, 1991

MCCULLOUGH, Sheila
Public librarian in support of distance learning in *Scottish Libraries,* March/April 1989, pp2-3

MCELROY, A. Rennie
Resourcing and supporting open and distance learning: some educational and managerial models in *Learning Resources Journal*, October 1988, pp100-112

Medios Audiovisuals Guía 92-93
Madrid: Universidad Nacional de Educación a Distancia, 1992

MIGUEL, Amando de
La sociedad española 1993-94: Informe sociológico de la Universidad Complutense
Madrid: Alianza, 1994.

Minister's PL Review takes off at last in *Library Association Record*, March 1994, Vol 96 (3), pp116-117

MODERNO, António
A comunicação audiovisual no processo didáctico no ensino e na formação profissional, Aveiro, ed. A., 1992

MODERNO, António Mendes dos Santos
Para uma pedagogia audiovisual na escola portuguesa: ensinos perparatórios, Averio, s.n., 1984

MORAGUES, J.; V. SAURI
Línia oberta: un desarrollo curricular para el autoaprendizaje en la educación de las personas adultas in *Revista de Educación a Distancia,* (Madrid), 4 (1992), pp58-62.

Moscoso, Purificación, Introducción al CD-ROM: Su tecnología y apliciones bibliotecarisu, in *Boletin de la ANABAD*, XL1 (1990), N 2/3, pp95-111

NATIONAL EXTENSION COLLEGE
The Adult Guidance Pack: Counselling for education, training and employment
Cambridge: National Extension College, 1993

NATIONAL EXTENSION COLLEGE
Open learning tool-kit: a development aid for managers
Cambridge: National Extension College, 1985

NATIONAL EXTENSION COLLEGE
Open learning : moving into mainstream
Cambridge: National Extension College, 1990

NATIONAL EXTENSION COLLEGE
Open learning: quantum leap [CRAC conference reports]
Cambridge: National Extension College, 1992

NATIONAL EXTENSION COLLEGE
Supporting open learners
Cambridge: NEC/MSC, 1985

NATIONAL EXTENSION COLLEGE
A-Z open learning
Cambridge: National Extension College, 1989

NATIONAL FEDERATION FOR EDUCATION AND RESEARCH
Open learning and special needs
Warwick: NFER/Nelson Publications, 1993

NAVA, K1 CD-ROM: Tecnologia, apliciones-y economia
Lisboa: Instituto de Emprego e Formação Profissional, 1990

NORTHERN TRAINING GROUP & SCTE
Co-operative Training Open Learning and Public Library Staffs, Interim Report
Glasgow: SCET, 1992

NUNES, Maria Clara Ramos
Os media na formação in *Formar* (26), 1990, p1

O futuro des sistemas abertos in *Expresso*, Suplemento Publicmedia Dossiers Informatica, 26.11.92, p16

Open Learning Directory
Oxford: Pergamon Press, 1994

OPEN UNIVERSITY
Educational guidance: a new service for adult learners
Buckingham: Open University Press, 1984

OPEN UNIVERSITY
On the line: counselling and teaching by telephone
Buckingham: Open University Press, 1983

OPTIS
Developing good practice in open learning
OPTIS, n.d.

PAINE, N. (ed.)
Open learning in transition: an agenda for action
Cambridge: National Extension College, 1989

PC-Idiomas (Catálogo), Madrid, 1993

PERCIRA, Costa et.al.
Aprendizagem e hipertexto in *Ciências da educaçãoem Portugal: situação actual e perspectivas*
Porto: Sociedade Portuguesa das Ciências da Educação, 1991, pp481-488

PEREIRA, José Ventura Cruz
Distance training and continuing education of teachers. What perspectives in Portugal in 9th International Seminar in Teacher Education
Prague: Chars Univeristy, 1990, v1, pp129-136

PROFISSIONALIZAÇÃO EM SERVIÇO
Proffisionalização em serviço: resultados finais 1989/90
Lisboa: Universidade Aberta, s.d.

Public Library Statistics 1993-94 Estimates
London: The Chartered Institute of Public Finance and Accountancy, 1993

RACE, Phil
How to win as an open learner
London: Council for Educational Technology, 1986

RACE, Phil
Open learning handbook: promoting quality in designing and delivering flexible learning
London: Kogan Page, 1994

RAULY, Thierry dumas de
Escolher e utilizar os suportes visuais e audiovisuais
Coimbra: Coimbra Editoria, 1992

RAVEN, Debby
Major role for libraries in Adult Learners' Week in *Library Association Record*, September 1993, Vol 95 (9), p500

REVISTA DE EDUCACIÓN A DISTANCIA
Madrid: Centro Nacional de Educación Básica a Distancia, Instituto Nacional de Bachillerato a Distancia

REYNOLDS, Peter
Open learning in the Highlands Region in *Scottish Libraries*, May/June 1990, pp7–8

RIVIS, Vivienne
Guidance for adult learners: the new challenges – towards a national strategy
Leeds: Unit for the Development of Adult Continuing Education, 1992

RIVIS, Vivienne & SADLER, Jackie
Quest for quality in educational guidance for adults
Leicester: National Institute of Adult Continuing Education on behalf of the National Educational Guidance Initiative of the Unit for the Development of Adult Continuing Education, 1991

ROWLANDS, Sue & ROWLANDS, Nye
Into open learning
London: Open Learning Systems Ltd., 1986

ROWNTREE, Derek
Teach yourself with open learning
London: Sphere, 1993

RUIZ, José
Un contrato a tiempo: La Ley de empresas de trabajo temporal abre una nueva vía de acceso al mercado laboral in *El País* (Madrid) (8–5–1994).

SAGAR, Eileen & STRANG, Alison
Open learning in action: using the learner's perspective to provide effective open learning
Cambridge: National Extension College, [1986]

SALGADO, Lucília
O outro lado da educação para além do intituído in *Revista Crítica de Ciências Sociais* (29), Fev. 1990, pp105–119

SARRAMONA, Jaume (ed.)
La educación no formal
Barcelona: Ceac, 1992

SCOTTISH EDUCATION DEPARTMENT
Distance no object: examples of open learning in Scotland
HMSO, 1982

SEMANA LUSO ESPANHOLA DE PEDAGOGIA
A inovação em pedagogia. Lisboa, 13-17 de Novembro de 1989
Lisboa: Universidade Aberta, 1992

SMITH, Vernon
Public libraries and adult independent learners: a report (Working Paper no. 27)
London: Council for Educational Technology, 1987

Software educativo in *Educación y bibliótecas,* N43 (1994), pp47-74

SPENCER, D.C.
Thinking about open learning systems (Working Paper no. 19)
London: Council for Educational Technology, 1980

Student nurse learns to win in *Library Association Record*, May 1993, Vol 95 (5), p279

Supporting Open Learners
Moorfoot: Open for Learning, [1994]

TAIT, Alan (ed.)
Key issues in open learning: a reader
Harlow: Longman, [1993]

TAYLOR, Alan (ed)
Long Overdue: A Library Reader
London & Edinburgh: Library Association Publishing & Mainstream Publishing, 1993

TEMPLE, Hilary
Open learning in industry: developing flexibility and competence in the workforce
Harlow: Longman, 1991

TEODORO, Victor Duarte & FREITAS, João Correia (org)
Educação e computadores
Lisboa: GEP, 1992

THACKRAY, Brian
The French View of Information in *ASLIB Information*, October 1993, 21 (10), pp375-376

THORPE, Mary
Evaluating open and distance learning
Harlow: Longman, [1993]

THORPE, Mary
Open learning and evaluation
Harlow: Longman, 1988

THORPE, Mary & GRUGEON, David
Open learning for adults
Harlow: Longman, 1987

TONKS, David
Evaluation of mentor support in open learning
Sunderland: Sunderland Central Library, [1993]

TRAINING AGENCY
Ensuring quality in open learning: a handbook for action
Sheffield: Training Agency, 1990

TRAINING AGENCY
Implementing open learning in colleges
Sheffield: Training Agency, 1989

TRAINING AGENCY
Implementing open learning in organisations
Sheffield: Training Agency, 1989

TRAINING AGENCY
Open learning – assessment
Sheffield: Training Agency, 1989

TRAINING AGENCY
Standards of performance for open learning staff: an interim framework
Sheffield: Training Agency, [1989]

TRAINING AGENCY
Taste of open learning
Sheffield: Training Agency, 1989

TRINDADE, Armando Rocha
Centros de produção mediatizada para o ensino a distância: presente e futuro in *El Centro de Diseno y Produccion de Meios Audiovisuais (CEMAV)*
Madrid: UNED, 1991

TRINDADE, Armando Rocha
Novas tecnologias no ensino e na educação
Lisboa: GEP, 1988

TRINDADE, Armando Rocha, et al.
Taxonomic framework for learning systems tools
Cleveland: Delta Essential, 1990

UDACE
The Challenge of Change: Developing Educational Guidance for Adults
Leicester: NIACE, 1986

Una introducción a la tecnologia del disco optico in *PC-Magazine* (1991), N 39, pp160-168

UNIT FOR THE DEVELOPMENT OF ADULT CONTINUING EDUCATION
Challenge of change: developing educational guidance for adults
Leicester: National Institute of Adult Continuing Education, 1986

UNIT FOR THE DEVELOPMENT OF ADULT CONTINUING EDUCATION
Delivering educational guidance for adults: a handbook for policy makers, managers and practitioners
Leicester: National Institute of Adult Continuing Education, 1989

VAN DER ZEE, Hendrick
The public library as an open learning centre in *Journal of Librarianship*, January 1988, pp1-15

Videos educativos
Barcelona: Serveis de Cultura, Popular, 1992

Videos educativos y culturales: catálogo (s.e.) Arasa Distribuciones, (s.a.)

WATERHOUSE, P.
Supported self-study: an introduction for teachers
Coventry: National Council for Educational Technology, 1986

WATKIN, Alan
Training Library Staff [Open For Learning]
Sheffield: Employment Department, 1993

WHIBLEY, Vaughan (ed.)
Libraries and open learning
London: Library Association, 1985

WILLETTS, David
Open learning in public libraries: a practical guide to implementing open learning
Baldock: British Association for Open Learning, for the Employment Department, 1991

WILLIAMS, Robert
Promoting open learning through public libraries in *Library Association Record*, May 1990, pp373-374

Abbreviations
UNED: Universidad Nacional de Educación a Distancia (Spanish Open University)
INBAD: Instituto Nacional de Bachillerato a Distancia (Spanish High School Diploma by Distance Learning)

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